18|E

IMPERIAL BUREAU
8 MAY 1930
OF MYCOLOGY

POULTRY NOTES.

January Work.

(By James Hadlington, Poultry Expert, in the "Agricultural Gazette of N.S.W.")

AS IS USUAL at this time of the year, following the decline from the peak of egg production, scarcely a day goes by on which cases of abnormal death rates among flocks are not reported, and assistance sought in connection therewith.

It should be realised that the strain consequent upon the flush laying period is responsible for some of the cases, and a slightly increased death-rate is to be expected, especially among aged hens and where there is a low standard of stamina and physique in the flock. But these by no means represent the really serious troubles that are met with.

It is a lamentable fact that many poultry farmers live in almost constant fear that some dread disease is about to invade their farms, or has already done so. This fear is sometimes stimulated by statements emanating from sources that are not altogether uninterested in the sale of remedies. The fact is that poultry, both in the chicken and the adult stages, is much less subject to diseases that are calculated to wipe out flocks, or even seriously deplete them, than is generally supposed.

Health Depends on Management.

If poultry farmers would only realise that the health of their flocks is largely in their own hands and subject to good management, there would be very little to worry about on the score of disease. Poultry farmers fall easy victims to amateurish advice or unsound ideas in connection with the management of their farms, and now and again suggestions of this kind spread like waves through the poultry industry, leaving loss and worry in their train.

It is not long since poultry-farmers were being advised to feed large quantities of chaffed-up green feed in the morning mash. Some fed as high as 60 per cent., with the result that there was an alarming reduction in production, and also in the quality of the eggs.

Another craze that swept the industry was over-cooling and turning eggs during incubation, with many failures in hatching as the result.

"Feed more concentrates" was yet another idea of the kind. Not satisfied with using the proportions necessary to balance the ration, many farmers got it into their heads that by using larger quantities of concentrates, better results would be obtained. The effect of following this line was to ruin the "hatchability" of the eggs, to cause a high mortality among the birds, and to bring about a heavy falling-off in the rate of production. The best layers ate the most and suffered in proportion, and the farmer, not connecting up the facts, was mostly left speculating upon the cause of all his troubles. Usually he ended up by blaming "some organism" instead of his own folly.

An instance of one of the many mistakes in feeding came under notice. A number of laying hens in a big flock became ill, and some died. The general symptoms were that the birds' combs turned dark in color, and there was marked loss of appetite, with an inevitable falling-off in egg production over the whole flock. A neighboring farmer was consulted, and his verdict was that the trouble was influenza. The assistance of the Department was sought, and a visit was paid to the farm. Appearances led me to the conclusion that the trouble was of dietetic origin, but in order to clear up any possible doubt —not about influenza, but about any disease whatever—three of the worst cases were despatched to the Veterinary Research Station at Glenfield for examination. The hens in question were kept there and fed on ordinary food for some time, but no disease was detected.

In the meantime, investigation was made on the farm into the feeding and management of the birds.

I found that the proportion of common salt used in the mash was dissolved in a small quantity of hot water and then poured over the linseed meal the night before, to allow it to soak. This was incorporated in the whole of the mash next morning. The result of this procedure would be to make a brine composed of salt and linseed meal, and when this was distributed through the whole mash it would simply be particles of well-salted linseed. But for the fact that the mixing of the mash must have been exceptionally thorough, salt poisoning on a large scale would have resulted.

The above is only one of many cases of errors in feeding that come under notice, and that are responsible for the deaths and loss of production for which disease is blamed.

Experience shows that fully 90 per cent. of all the cases of the kind described are not due to specific diseases, but to errors in feeding in one way or another. In other words, they are dietetic troubles, and, as such, are avoidable by careful management.

The danger incurred by farmers using concentrates in any other way than by weight being realised, a table of measures corresponding to weights was worked out and published in these notes some few years ago. The table is now reprinted.

Paste This Up In The Feed Room.

A kerosene tin filled with the following articles weighs approximately as under:—

	lb.
Pollard	18
Bran	12
Lucerne meal	12
Wheat (whole)	30
Maize (whole)	28
Maize (cracked)	25

A quart measure filled, but not pressed down, will weigh approximately:—

	lb.	oz.
Wheat meal	1	8
Pollard	1	0
Bran	0	8
Lucerne meal	0	8
Oatmeal	1	0
Barley meal	1	8
Maize meal	1	8
Linseed meal	1	0
Wheat (whole)	2	0
Maize (whole)	1	12
Peas (whole)	1	12
M.I.B. Meat meal	1	8
M.I.B. Compo meal	1	8
M.I.B. Bone meal	1	12
Common salt (fine)	2	0
Flowers of sulphur	1	4
Epsom salts	1	12

The only safe course, where other measures are used, is to ascertain the weight and mark same on the vessel used as a measure.

The one feature most responsible for errors in feeding is an almost general desire on the part of the farm-

er to depart from the beaten track in respect of the ration fed to the birds. A desire on the part of everyone to endeavor to increase egg production is well understood, but many of the expedients resorted to are worse than futile because they are mostly made with an imperfect knowledge of the factors involved.

A Good Ration.

For some years past the Department has been conducting feeding experiments, with a view to finding out whether improvement is possible in the ration fed at Hawkesbury Agricultural College and other Government farms. The results are set out in the literature issued on the subject, but nothing in the way of improvement has, so far, come out of these experiments, and the only changes that have been made for some years past are in respect of the substitution of bran for lucerne, or vice versa. This change has been necessary mostly on account of the class of lucerne meal available. If the latter is of inferior quality, it is left out and bran substituted. On the ordinary poultry farm, where there is only the economic point of view to consider, both price and quality should be taken into account, because the feeding value of bran and good lucerne meal, or chaff, is much the same.

The ration fed and advocated by the Department, which has proved its worth in connection with the Egg-laying Competitions, appears in all the literature on feeding issued by the Department, but a reminder might not be out of place. It consists of the following morning mash:—Pollard, 60 lb.; bran, or bran and lucerne meal combined, 35 lb.; meat or Compo Meal (M.I.B.), 5 to 7 lb.; salt, 22 oz. It is most important that the salt be dissolved in the whole of the liquid used to mix the feed. The evening feed consists of wheat and cracked maize, two-thirds of the former to one-third of the latter, but the exact proportions are not material.

BEEKEEPING.
HELPING NATURE A LITTLE.

Control of Brood Rearing.

SINCE NORMALLY a worker bee, before going to the field, spends the first two or three weeks of its life in duties within the hive, most of the bees should emerge from the brood cells about three weeks in advance of the main honey flow, in order to have the largest possible number of field bees ready at the proper moment. In other words, the queen should reach her maximum egg-laying rate during the period six weeks prior to the honey flow.

Since a colony left to itself does not usually bring forth the new worker bees at the most advantageous time, a correct understanding of the principles governing brood rearing throughout the year becomes of prime importance to the beekeeper, if he is to handle his colonies in such a way as to secure a maximum honey crop. The principles are discussed in Department Bulletin No. 1439, prepared by the United States Department of Agriculture after an intensive study of the brood-rearing cycle of the honey bee.

Lack of knowledge of the principles governing brood rearing may cause a reduction in the honey crop by bringing about in a colony any or all of the three following possibilities:—

1. The population of the colony may not become large enough to provide sufficient field bees during nectar flows to gather surplus adequate to give the beekeeper a fair return for the time spent and capital invested.

2. Surplus honey may be consumed in regions of early nectar flows by bees which have emerged too late to serve as nectar gatherers, and too early to winter over or even assist in building up the colony for the winter.

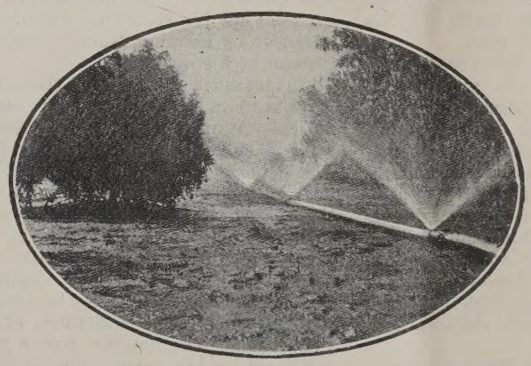
3. Swarming may be stimulated if the ratio between hive bees and field bees does not remain such as will avoid causing a congestion within the hive whenever one of these classes is relatively idle while the other is extremely busy.

The prevention of any or all of these states involves such questions as wintering stores for spring, requeening, population of the colony at the beginning of brood rearing, swarm control, dequeening, removal of brood, and other related factors.

Among some of the important factors which are within the power of the beekeeper to provide are a prolific queen, sufficient bees wintered over to meet all brood-rearing requirements in the spring, sufficient worker brood cells, sufficient stores of good honey, and proper insulation. All of these are factors which must and can be provided in the manipulations in the latter part of the previous season if the beekeeper wishes to take advantage of the natural tendency toward intense brood-rearing activity at the beginning of spring.

Pope's New Irrigation System

Pat. Nos. 9127/22 & 21419/25



The **LATEST, CHEAPEST,** and **BEST,** for **FRUIT, FODDER** and **VEGETABLE CROPS.**

(See descriptive matter in October issue.)

One of many testimonials:

Pope Sprinkler Co., Croydon. Highbury, S.A.

Gentlemen,

Having used your irrigation system on my Orange Orchard for two seasons, I consider it the most effective method of orchard irrigation I have yet heard of. The output from the pump delivering eleven thousand gallons per hour, at thirty pounds pressure, is comfortably handled by one man without the necessity of any stop during the day, and by allowing the pump to run for an hour after he leaves work, I get ten hours pumping, or one hundred and ten thousand gallons of water applied for eight hours' work, and an absolutely even distribution of the water as well, in addition to effecting a great saving in labor.

Needless to say, I should not like to have to return to the old furrow and check system of irrigation.

Yours faithfully,
L. J. WICKS.

Full particulars from any of the following:—

Pope's Sprinkler and Irrigation Coy., (Patentees)

ROBERT STREET, CROYDON PARK, S.A.

Agencies: John Danks & Sons Pty. Ltd., Sydney.
John Danks & Sons Pty. Ltd., Melbourne.
Messrs. Clark & Faucet, Brisbane.
Messrs. Harris, Scarfe and Sandover Ltd., Perth.

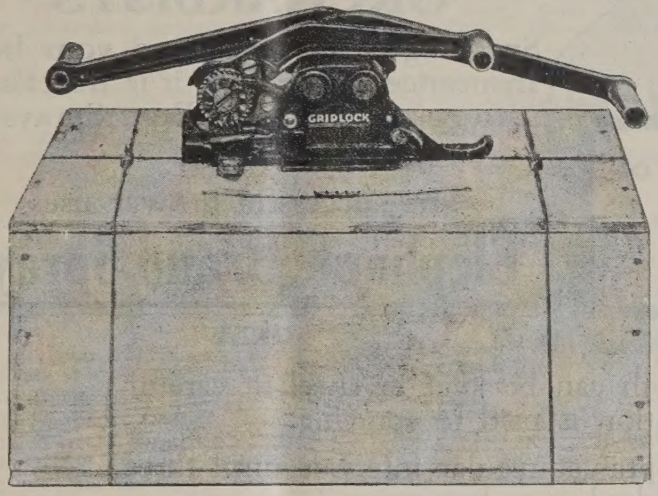
FOR BEST FRUIT PRICES —

WIRE-STRAP YOUR CASES

in the

LATEST AND MOST IMPROVED METHOD

The "GRIPLOCK"



The Griplock Improved Box Strapping Tool.

is the most efficient as well as the cheapest BOX STRAPPING method on the market.

IT IS THE ONLY TOOL WHICH OPERATES A HARD WIRE

Once GRIP-LOCKED the wire cannot be tampered with.

Full particulars from :— **Phone : J 2009**

GRIPLOCK—Safe Seal Systems, Waltham Place, Richmond, Vic.

Sole Australian Agents for
Root Dusting Mechanical
Appliances
(Patented)

Atomol Dusts Ltd.

Manufacturers of

DUSTING MATERIALS used as INSECTICIDES & FUNGICIDES ON PLANT LIFE

DUMPHRIES PLACE
off GILLES STREET
ADELAIDE

Growers would be well advised to allot part of their orchards this coming season for the purpose of making a comparison between dusting and spraying. Providing that the correct dust and dusting mechanical appliances are used, we are convinced that dusting will be generally adopted for controlling all insect and fungi pests.

Atomol dusting material and Root mechanical dusting appliances combine all the essential features of successful dusting. One man with a Root Hand Dust Gun, costing only a few pounds, will cover as much ground as a power spraying machine costing £100 or over in a given time.

SEND FOR OUR PAMPHLET, OR ENQUIRE THROUGH THE UNDERMENTIONED INTERSTATE AGENTS:—

VICTORIA:—
Irymple Packing Co., Irymple.
Irymple Packing Co., Merbein.
Sarnia Packing Co., Mildura.
Humphreys & Conran, Red Cliffs.
Mr. G. W. Hall, Box 1, Bunyip.

NEW SOUTH WALES:—
Anderson & Co., George St., Sydney.

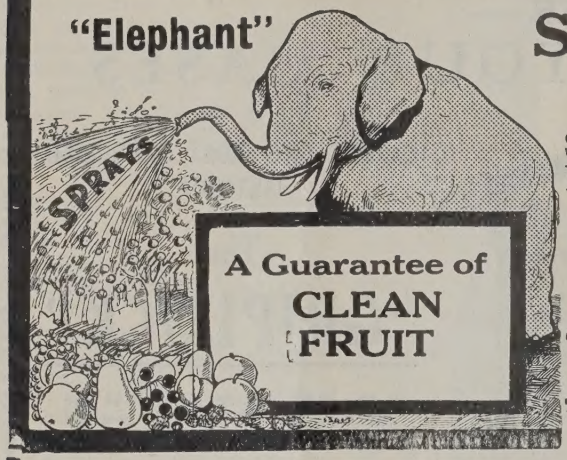
QUEENSLAND:—
Buzacotts' Queensland Limited, Brisbane.

WESTERN AUSTRALIA:—
Westralian Farmers' Union, 569 Wellington St., Perth.

TASMANIA:—
Charles Davis Ltd., 60 Elizabeth St., Hobart.

NEW ZEALAND:—
Harold Lightband Ltd., 79a Lichfield St., Christchurch.

THE ROOT HAND DUST GUN IS AN IDEAL MACHINE FOR THE APPLICATION OF CALCIUM CYANIDE OR CYANGAS.



STILL ON TOP!!

ORCHARDISTS

Spraying is essential and your best Insurance—Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand Sprays

ONLY

The Codlin Moth can be kept in check if careful attention is paid to spraying.

Experts say:—"Spray at regular intervals until three weeks before harvesting."

Note this and Use

"Elephant Brand" Arsenate of Lead

(Paste and Powder)

Other Elephant Brand Products

Bordeaux Mixture Powder - Bluestone - Lime Sulphur

Prepared Red Oil - Prepared Crude Oil

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of Elephant Brand Sprays

Manufacturing Chemists, MADDEN GROVE, BURNLEY, MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for January 1928

Illustrations.

	Page.
Root Stock Experiments and Fruit Tree Growth	7
Loading Australian Apples for Export	33
Shield for Apple Packing: Won by Somerville, 1927	35
Discharging Australian Apples at London	39
King George Dock, Hull	41

Subjects.

Australian Fruit Exports: Special Export Section	30–41
American Fruit Crops	29
Australian Fruit: Comments by English Buyer	13
Canning Fruit Notes: Preservation of Whole Fruit with Sulphur Dioxide; Fertilisers for Peaches;	18–19
Citrus: Importation of Foreign Citrus Fruits; South African Orange Crops; Orange Drinks in W.A.; Ceylon to Grow Grape Fruit	14–15
Cold Storage Problems: Dr. Kidd's Report	17
Dried Fruits: Production of Good Quality Zante Currants; Drying Apricots	10–11
Dr. Tillyard's Appointment	6
Fruit Pre-cooling to be Tested	17
Fighting Insect Pests	xv.
Fruit Fly Control	45
Imperial Fruit Show	xvi.
Insect Pests of Dried Fruits	22
Markets: British and Australasian	42–43
New South Wales: Fruit Crop Reports and Prospects; Co-operative Marketing at Batlow	23
New Zealand: Fruit Crop Reports and Prospects; Blister Disease of Apples	16
Poultry and Beekeeping Notes	1–2
Queensland: Orchard Work for January	44
Reliable Trees: Root Stock Experiments at East Malling	7–8
South Australia: Fruit Crop Prospects	20–21
Subscribers' Payments Received	xvii.
Tasmania: Market and Crop Prospects; Orchard Notes	46–48
The Thinning of Apples	8–9
Treatment for Root Borers	29
Victoria: Fruit Crop Reports and Prospects; District Notes	27–29
Western Australia: Fruit Crop Reports and Prospects; District Notes	12–13

INDEX TO ADVERTISERS.

Books, Publications—

"Garden Lover," Bank House, Bank Place, Melbourne, p. xxi.

"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii.

Canning Machines—

Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. ix.

Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—

Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—

"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. xvi.

Dusting Machines—

Atomol Dusts Ltd., Dumphries Place, Adelaide, p. 3.

Fruit Buyers—

Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xix.

Fruit Tree Suppliers—

Brunning, John, and Sons, Somerville, p. 6.

C. A. Nobelius & Sons, Emerald, Vic., p. 22.

Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), cover ii.

Two Bays Nurseries, Mooroduc, Vic., p. xxii.

Fruit Graders—

"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood (Vic.), p. 45.

Fruit Picking Bag—

The "Bay View," F. R. Mellor, 440 Elizabeth-street, Melbourne, p. xv.

Irrigation Machinery—

Pope's Sprinkler and Irrigation Co., Robert St., Croydon Park, S.A., p. 2.

Irrigation Hose and Canvas Goods.—

Wyett Mfg. Co. Pty. Ltd., Geelong, Vic., p. 19.

Manures, Fertilisers, &c.—

Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. xvii.

Motor Cars and Trucks—

Ford Motor Co. of Aus. Pty. Ltd., all States, p. xi.

Brockway Trucks, Ronaldson Bros., & Tippett Pty. Ltd., 630a Bourke St., Melbourne, p. xviii.

Orchard Ploughs, Cultivators, &c.—

D. Harvey, Box Hill, Melbourne, p. 12, 17.

Orchard Requisites—

McPherson's Pty. Ltd., 582 Collins St., Melbourne, Vic., p. xii.

Patent Attorney.—

Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. xvii.

Poultry—

Karswood Poultry Spice, Agents all States, p. xiv.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—

Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xx.

Softwood Fruit Cases—

C. H. Tutton, 40 Queen St., Melbourne, p. 43.

Spray and Dusting Material—

"Arsinette," Wm. Cooper & Nephews Ltd., 4 O'Connell St., Sydney, p. x.

"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.

"Elephant" Brand, Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. 4.

"Gargoyle' Spraying Oil, Vacuum Oil Co. Pty. Ltd., cover i.

"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.

"Clensel," Bruce Anderson, 56 Hardware St., Melbourne, p. xv.

Dusting Powders, Atomol Dusts Ltd., Dumphries Place, Adelaide, p. 3.

"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. iv.

Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. xxii.

"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. xviii.

"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 11.

Spray Pumps and Guns—

Alumino-Thermic and Metal Sprayers Ltd., 247 George St., Sydney, N.S.W., p. iv.

"Bave-U" Power Sprayer, Russell & Co., Box Hill, p. xviii.

"New Hercules" Sprayer, Farm and Pastoral Supplies Pty. Ltd., 500 Bourke St., Melbourne, p. xvi.

604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. xix.

Spray Pumps, etc., Cooper Pegler & Co. Ltd., 24d, Christopher St., London, E.C.2, p. 48.

Strawboard Liners for Cases—

J. Fielding & Co. Ltd., Chalmers St., Sydney, p. xii.

Strapping Fruit Cases—

Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne p. xiii.

"Griplock," Wire Strapping, Jas. Henty & Co., 499 Lit. Collins St., Melbourne, p. 3.

Stencilling Inks—

Caldwell's Pty. Ltd., Yarra Bank Rd., South Melbourne, p. 16.

Transport—

London and N. E. Railway, Burns, Philp & Co., agents, p. 30.

Tree and Stump Pullers—

Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix.

"Digger," Quick Manufacturing Co., 75 Pender St., Thornbury, p. xviii.

FRUIT TREES for Propagation

Many lines are worked on contract to Orchardists, Wholesalers, and others.	Have you any particular line you wish propagated from your own particular trees?	Budding is carried out during January, February, and March, 1928, but trees budded will not be ready till winter 1929. Any quantity, any kind.

186 Acres Under Intense Cultivation.

CATALOGS, ETC. FOR 1928

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 61 YEARS

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is **8/6.** All other places, **10/6,** post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices where copies and full particulars are obtainable) are as follows:—

HEAD OFFICE:

Bank House, Bank Place, Melbourne, Victoria

Representatives in all States and New Zealand.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

American Office: S. D. McFadden, Pacific Bldgs., Market Street, San Francisco, Cal., U.S.A.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

FIGHTING INSECT PESTS.

Dr. Tillyard Appointed.

After consideration of recommendations by the Council for Scientific and Industrial Research, the Federal Ministry has decided to appoint Dr. R. J. Tillyard, F.R.S., etc., of the Cawthron Institute, Nelson, New Zealand, to take charge of the council's entomological investigations.

The Prime Minister (Mr. Bruce) said that the attention of the Ministry had been directed by authorities to the enormous losses caused by insect pests. It had been estimated that on the average not less than 10 per cent. of the vegetable foodstuffs cultivated in the world was lost each year because of the depredations of pests. In Australia the pastoral industry in a bad season lost £4,000,000. The Buffalo fly was a most serious menace to the cattle industry, and there were many other insects, such as thrips, lucerne fleas, grass grubs, codlin moths, aphids, and scale pests, which also caused enormous damage.

A summary of the expected yields and export quantities of Apples in the various States for the 1928 season is given in our Special Export Supplement.

Reliable Trees.

Splendid Work at the East Malling Research Station.

(By F. Thomas, M.A.).

WITHIN A YEAR or two of planting an area of young trees, the orchardist often notices striking differences of growth and habit. Even if the soil is uniform, and the trees receive the same care and treatment, these variations appear. Some grow much faster than others; some come into blossom earlier; some are more subject to disease. Usually these variations persist throughout the life of the tree, and in every orchard there are trees that, in spite of special care, remain unprofitable.

It has been suggested that the cause of these differences is the variation in the root stocks used by the nurserymen, but till lately no attempt has been made to test this, or to standardise the stocks in commercial use. The nurseryman has to produce trees on a commercial basis. He must grow them quickly, and produce them cheaply, and he has little opportunity for research.

It is clear, however, that if we could standardise these stocks, and use only those that produce satisfactory trees, it would be better for the industry.

Pedigreed Trees.

Progressive farmers have proved the benefit to be gained by using selected strains of seed for growing wheat, oats, maize, or potatoes, and orchardists are beginning to realise the importance of using stocks that can be relied upon to produce trees of a given character. Poultry farmers pay big prices for a certain "strain" of fowls, and dairymen know the value of pedigreed stock in the production of milk and cream. We have sometimes heard references to "pedigreed" trees, but the term seems to apply rather to bud selection than to the root stock, which seems, however, to be the more important partner in the development of the tree. There is a growing demand among orchardists for the establishment of an experimental orchard or research station, where work of this kind could be done, and the success attending the operations at the East Malling Research Station provides a strong argument in its favour.

Among the orchards in Kent, for the last fourteen years, the East Malling Research Station has specialised in work of this kind, and results of such value have been attained that a substantial grant has been made from the Empire Marketing Fund, so that its researches may be extended. At the request of the Empire Marketing Board, the Director, R. G. Hatton, M.A., has written a report on the conclusions arrived at, a summary of which appears below.

Root Stocks.

The root stocks in common use for deciduous fruits are either raised from seed, or by vegetative methods. Now it has been found that the seedling stocks in common use show great variation. There are wide differences in the type of roots, and in the suitability of the stem to receive the buds of the scion. It has been clearly shown that much of the variation among trees, of growth, of cropping, of root system, of resistance to disease, is due to the diverse character of these seedling root systems.

A Special Instance.

Here is an actual case. Sixteen trees of "Early Victoria" Apple, budded on seedling "Crab" stocks, were selected for uniformity in the nursery, but have shown twice the amount of variation of a similar set of trees raised by vegetative methods. An acre of such trees 13 years old would have produced 28 tons of fruit. If all the trees had been as good as the

The Effect of Rootstocks on Tree Growth: Experiments at the East Malling Research Station have revealed such striking contrasts as the above in the growth of Apple trees on seedling stocks. Left: The largest, and (right) the smallest of 16 similarly treated "Early Victoria" Apple trees on seedling crab stock, both 13 years old.

best four, the owner would have harvested over 51 tons. If all the trees had averaged no better than the worst four, **he would have had less than 10 tons.**

The work done at East Malling has shown that it is possible to eliminate these poor trees, and to raise the whole standard of production.

Seedlings have been popular as root stocks because they are more cheaply raised than the stocks that require layering. Also there is an idea that seedlings are deep-rooted, while trees worked in layers are shallow. Tests have disproved this. The difficulty of raising true lines of seeds has made them unreliable. Such an important characteristic as resistance to Woolly Aphis in the "Northern Spy" stock is lost as soon as vegetative methods are replaced by the use of seedlings. When we have found the most satisfactory stocks, the only way to retain these characteristics is to multiply them by some form of cutting or layer.

Standardised Stocks.

At East Malling it has been shown that the root stocks used in commerce, where they were not chance seedlings, were often badly intermixed. Nurserymen throughout the United Kingdom were asked to supply "Paradise" stocks as true samples for experimental work. Of these 36 per cent. were mixed, and 66 per cent. wrongly named. Such a state of affairs resulted in the production of numbers of unsaleable trees, and of many disappointments in the orchard, while the experimenter, working on such variable material, was baffled by the conflicting results.

Observation and selection spread over fourteen years have shown that of 17 frequently intermixed varieties used in commerce, it has been possible in the case of Apples to give the grower four different types of tree of any one variety to suit a particular purpose, **"and it is possible to predict, with considerable accuracy, over a wide range of conditions of soil, variety, etc., the approximate size to which the tree will grow, the age at which it will come into bearing, its period of blossoming, and its liability to certain diseases, and trouble from pests."**

Similar work has been done in relation to Pears, Plums, and Peaches, and by the use of certain standardised root stocks, it is now possible to offer trees with a wide range of performance.

Application of These Results to the Industry.

The value of such work to fruitgrowers and the industry generally can be readily appreciated. The nurseryman will not waste his time in trying to combine incompatible roots and scions. He will produce a better tree in a shorter time, and can offer with certainty trees of a known capacity for growth and cropping.

The orchardist being able to get trees to suit his particular conditions of soil and climate, can plan his work better, and be assured of a higher standard of production. Knowing the type of tree he has planted, he will be able to prune and manure more intelligently.

The investigator working on known material has a far better chance to get reliable results from his observations and experiments. With the use of standard stocks he can carry out tests with a smaller number of trees, and be assured of the truth of his conclusions. Living things like trees are more difficult, as well as more interesting to work with, because of their liability to vary, and everything that tends to standardise the material under test, helps greatly in arriving at conclusions.

Most of these investigations upon Apple stocks seem to have been based upon the "Paradise" and the "Crab" stocks. There is a splendid chance for investigation upon similar lines of the "Northern Spy" stock, used almost universally in Australia and South Africa. When orchardists realise the value of this work they will insist upon the establishment of similar Research Stations in Australia. A few would almost certainly return millions thousand pounds spent in this way within one generation.

The Thinning of Apples.

A Practice that Increases the Proportion of Fruit Going into the Higher Grades—and so Increases Profits.

Most of the Apple-producing States of Australia are anticipating heavy crops this season. The following article, by Prof. T. G. Bunting, Horticultural Department, Macdonald College, Canada, will therefore be read with interest. (For the purposes of comparison, reckon five dollars to the £.) He says:—

The writer has long been an advocate of thinning Apples in Eastern Canada, and has practised it on many varieties on a considerable scale in the Macdonald College orchards. In addition, experiments have been carried out with the assistance of students attending the College. From observation, here, in California, Oregon and British Columbia, I am convinced that thinning offers a practical means for fruitgrowers to raise the quality of their fruit, to prevent a loss through breakages of limbs and the necessity of using props in the orchard, and a means of obtaining a higher net return from the crop. In addition, another advantage of some importance is the reduction in labor costs required in harvesting, grading, and marketing the crop. This reduction should more than offset the comparatively small costs of thinning.

Thinning has become a regular practice in many orchards, including Apple, Pear, Peach and Plum. The far western or Pacific coast States and British Columbia growers find it an essential practice in their orchards, as the high cost of marketing does not permit them to make a profit from low grades of fruits. Thinning, next to spraying, is probably the chief factor in raising the quality of a crop and in eliminating No. 3 and cull grades. Thinning does not necessarily, and never proportionately, reduce the size of the crop on account of the increase in size of the remaining fruits. It greatly increases the quantity of the No. 1 grade and reduces the quantity of the lower grades. And to show the differences in prices of the several grades, a number of examples are given from the Fruit Branch, Telegraphic Report of 1924 for the Montreal market:—

September 15—Duchess:—
- No. 1 .. .. $4.50 to 4.50
- No. 2 .. .. $3.25 to 3.75

September 29—St. Lawrence:—
- No. 1 .. .. $6.50 to 7.00
- No. 2 .. .. $5.50

October 9—Wealthy:—
- No. 1 .. .. $5.50
- No. 2 .. .. $4.50

November 20—McIntosh:—
- No. 1 .. .. $8.00 to 9.00
- No. 2 .. .. $6.50 to 8.00

January 2:—
- No. 1 .. .. $8.00 to 8.50
- No. 2 .. .. $6.50 to 6.70

Thinning of Apples should be commenced soon after the "June drop" has occurred and when the Apples are from one inch to one and a-quarter inches in diameter, but this will vary somewhat with different varieties. It is quite satisfactory to continue thinning Apples until they have reached one and a-half inches in diameter or a little larger, but of course the larger they are when thinned the less the advantage secured. The dates will vary with the different seasons, but usually in Quebec it will extend from about June 20 to July 15. One should start the thinning on the earliest ripening varieties, such as Transparent and Duchess, and followed with the Wealthy, and later with the late fall and winter Apples.

Heavy setting of fruit is due chiefly

to weather conditions at blossoming time. Following a heavy set of fruit in an orchard or on a single tree there is a tendency for that orchard or tree to develop a much smaller number of blossoms for the next season's crop. Thus we have a tendency towards alternate bearing in an orchard, and many consequent troubles resulting from it. Thinning will, with other good orchard practices, have a tendency to make for more regular bearing in an orchard.

Among the advantages of thinning that may be pointed out without further explanations are the following:—(1) Increase in the per cent. of the higher grades, and a consequent reduction or elimination of the No. 3's and culls of blemished fruits; (2) Increase in size of fruit; (3) Greater uniformity of fruit; (4) Increased color; (5) reduction in per cent. of windfalls; (6) Lower costs of picking, grading and packing; (7) Often fewer packages required; and (8) Less likelihood of breakages of limbs or necessity for using props.

Method of Thinning.

Scissors have been used in the past for this work, but are not necessary or rapid. The best method is to grasp the stem of the Apple to be removed firmly between the thumb and first finger and with a quick movement of the other three fingers to break the Apple from the spur. This is done in such a way that the stem is broken, and in this way there is little danger of injuring the spur or adjoining fruit. Practice will in a short time make one experienced in this work, and girls, boys, or women quickly adapt themselves to it.

The number of Apples to remove will depend on the final set of fruit after the "June drop" is over and on the variety. Some varieties tend to develop two or more Apples on a spur, while the McIntosh usually sets a large proportion of its fruits singly. Where the crop is very light, that is only a few spurs carrying fruit, it may be desirable to leave two Apples on a spur. Generally, however, only one Apple should be left to a spur, and that one the best one. Where there has been a very heavy set of fruit it is often desirable to remove all the Apples from some spurs so that no two Apples will be closer than four inches; and six inches would be better in varieties such as Transparent, Duchess and Wealthy.

The following data in Table 1 is given, showing actual results in thinning at Macdonald College in 1920, under D. M. Laurie, a student in horticulture.

From Table 1 some idea of the numbers of Apples taken off in thinning can be obtained, and it will be noted

Table 1. Transparent Apples.

Trees.	Method of Trim. ming.	No. Apples Re- moved.	No. Apples Har- vested.	No. Apples Windfalls.	Yield in 11 qt. baskets. No. 1	No. 2	No. 3	Total Yield.
1	A	2,632	1,640	17	16	7	5	28
2	B	1,263	2,263	123	14	10	3	27
3	C	——	3,190	572	7	12	13	32
4	A	2,291	1,966	104	22	5	1	28
5	B	1,188	3,232	98	19	8	3	30
6	C	——	3,391	692	7	15	12	34
	Wealthy Apples.							
1	A	1,973	1,642	39	9	11	2	22
2	B	1,754	1,963	69	14	8	2	24
3	C	——	2,976	147	5	11	10	26
4	A	1,822	1,680	79	13	8	1	22
5	B	798	1,575	136	11	9	1¾	21¾
6	C	——	2,128	247	5	11	8	24
	Duchess Apples.							
1	A	1,117	996	81	9	4	1.5	14.5
2	B	1,094	1,239	124	8	7	2	17
3	C	——	2,026	284	5	13	3	21

that although the total crop is smaller it is not materially so. The increase in the size of the fruit as the result of thinning is shown in Table 2.

Table 2.

Variety	Method of Thinning.	No. of Apples per 11 qt. basket.
Transparent ..	A	70
,, ..	B	97
,, ..	C	97
Duchess	A	69
,, ...	B	73
,, ...	C	96
Wealthy	A	75
,, ...	B	77
,, ...	C	100

The final test of the value of thinning is the financial returns or selling prices of the different grades of fruit. Although an actual record was not kept in all cases, the following is approximately correct for each of the three grades in the above experiment in 1920:—Transparent—90, 70 and 35 cents; Wealthy—90, 65 and 35 cents, and Duchess—75, 60 and 40 cents. For Crimson Beauty, a very early variety, the average returns for the different grades were as follows:—$1.25, 65 and 35 cents. The cost of the package, interest on the investment, and the labor of growing the crop, are the same in all grades. But with the thinned crop the labor of picking, grading and packing is considerably less, because of the larger size and greater uniformity of the Apples. It can be seen readily that at 35 or 40 cents per 11 quart basket for No. 3's there can be little, if any, profit; in fact, in 1920 there would have been an actual loss on each package. At 75 to 90 cents per 11 quart basket for No. 1's there would be quite a large margin between the cost and selling price, and this would be the profit on the transaction.

In 1924 Mr. J. A. Goldie, student in horticulture, was in charge of the thinning work at the College and obtained the following results on three Transparent trees which had a very heavy set of fruit:—

Table 3. Thinning Transparents.

	Unthinned.	Thinned one to spur & 4 ins. apart.	Thinned one to a spur & 8 ins. apart.
Total No. Apples	5,644	7,577	8,746
No. of Apples removed	0	3,200	4,830
No. of Apples harvested	5,644	4,377	3,916
Barrels of Apples	4.88	4.12	4.36
No. of Apples per bbl.	1,156	1,060	894
Increase in size	0	9 per cent.	29 per cent.
Time required per tree	0	3 hours	3½ hours

Transparent Apples sold at the following prices for the three grades in 1924:—No. 1—60 cents, No. 2—35 to 50 cents, No. 3—20 to 30 cents, with very slow sales for No. 3's.

It is suggested, and strongly recommended that commercial Apple-growers in the province of Quebec give the thinning of Apples a careful trial. The writer is confident that if a few growers will seriously test out thinning on heavily laden trees that they will become converts to the practice in future years, and that other growers will quickly adopt the method.

Dried Fruit Department

Production of Good Quality Zante Currants.

(By A. V. Lyon, M.Ag.Sc., Commonwealth Research Station, Merbein.)

General.

DRYING CURRANTS is comparatively a simple matter. No improvement in colour subsequent to harvesting is possible. It is necessary to exclude sunlight; otherwise partial bleaching and "dulling" results. Currants should be shade dried, the usual method being to dry either on roofed racks with side curtains (hessian), or on stacked trays. Subsequent exposure on hessian, to ensure satisfactory reduction of the moisture content, is necessary. Care should be taken to dry as completely as possible on the shaded racks or trays, in order that the final period of exposure to the sun should be as short as possible.

Complete drying before handling is advantageous also for preservation of "bloom." A final sweating in bulk is necessary, to give an even distribution of the moisture content.

It will thus be seen that, though deterioration of quality may result from faulty processing methods, the chief factors on which quality depend operate prior to harvesting. Apart from the season, most of these factors are controllable, and the production of a high quality dried product is mainly dependent on methods of production.

Fresh currants are held to be of good quality when the size is uniform and comparatively large, the sugar content high, the pigment blue-black, and the bloom pronounced. Faults chiefly show as a percentage of red or light-coloured berries, low sugar content, and an undue proportion of "boys" (large berries with seeds). The red berries, on drying, constitute the proportion of berries known to the trade as "foxy," while a low sugar content is reflected as a lack of "body" in the dried product. "Boys" are at present attributed to strain rather than to environment, and are not controlled. Separation of "boys" is effected during the operations of picking and spreading, or by sieving subsequent to drying. As the above faults usually occur in the individual bunches, and not on the whole crop, separation of the fresh fruit into two classes (good and mixed inferior) has proved practicable. The usual method is to pick out the inferior bunches while the fruit is on the spreading tray.

Routine Operations Affecting Quality.

1. Method of Pruning.—The currant fruits satisfactorily with either long (cane) or short (spur) pruning. Greater yield is obtained when the vines are wholly or partly pruned to canes, but the quality compared with spur-borne fruit is invariably unsatisfactory. For this reason, spur-pruning has become general throughout the Murray Valley, canes being left only when desired for extension or replacement of the permanent arms.

2. The Quality of the Bearing Wood.—The base of shoots of average length and maturity at the dormant period constitutes the best bearing wood. The spurs of gross canes tend to irregularity of growth and non-setting of fruit, while the spurs of weak shoots produce small pendulous growths carrying inferior bunches. Adjustment of the number of spurs in accordance with the size and vigor of the vine is essential. The nature of the growth of the previous year is a guide to adjustment in this particular. Leaving too much bearing wood is usually reflected as a disparity in the size of the shoots, and often in the development of one instead of two shoots on each spur. Correction is secured by reduction of the number of spurs, either by cutting off some of the secondary arms at suitable spaces, or more commonly by the adoption of the "single spur" system of pruning. Total removal of all weak growth, except where required for replacement of lost spurs, is essential. The test of efficiency in regulating bearing capacity is by examination at the dormant period. Each spur should produce two good average shoots, and the system is perpetuated by spur pruning to one, usually the lower, of these two shoots.

3. Correction of Faulty Pruning.—It is not practicable to entirely eliminate at pruning time the buds producing inferior shoots and fruit. A proportion of the base buds of shoots which have been removed, and buds on small wood missed in pruning, usually sprouts. Disbudding of weak growths in early spring gives best and most permanent results. The alternative is separation of the faulty bunches from the rest of the sample at harvest, and probable recurrence of the trouble from the base buds after the following pruning. Disbudding involves slight decrease in the total yield, which is more than counterbalanced by higher average quality, and less expense in isolating inferior fruit at harvest.

4. Cincturing.—Cincturing too early contributes to poor quality, being reflected as irregularity in size and color of the fruit. The operation should be delayed until the majority of the caps have fallen. Late cincturing is in some seasons associated with excessive dropping of berries.

As good quality is essential, the possibility of fallen berries is a necessary risk, and may be largely counteracted by the measures mentioned below.

5. Topping.—Topping involves removal of functioning leaves, and consequent interference with the growth of the vine. The practice is warranted prior to cincturing as an additional check to aid setting and to prevent falling due to delayed cincturing.

In the case of vigorous currant vines in a hot, dry spring, topping at the first flowering prior to the cincture, and again immediately after cincturing, are necessary precautions.

Mild "topping" or "pinching" (removal of two to four leaves) is sufficient. Subsequent to setting and commencement of growth of the berries, topping retards development, and is justified only in cases where the growth is so excessive that it interferes with tillage implements.

6. Defoliation.—Though the de-

struction of functioning leaves is not in general a sound practice, removal of a few large basal leaves is often of advantage in letting in the sunlight necessary for proper development of the grape pigments. Very few leaves should be removed, otherwise the improvement in colour is counteracted by a decrease in sugar content.

Defoliation is not generally necessary in a favorable season, if pruning and disbudding have been efficiently performed. The need for the operation becomes apparent in some seasons in early January, usually in circumstances where the growth shades the fruit excessively, and colour changes are in consequence irregular and incomplete.

7. **Pre-harvest Irrigation.**—Irrigation late in the ripening period, after the blue-black pigment has appeared in a proportion of the berries, reduces quality considerably. The effect shows as a delayed and non-uniform ripening, and increased variation in the size of the berries. Another harmful result is the preservation of the undesirable red pigments.

Conclusions.

Careful pruning, choice of bearing wood, disbudding, and defoliation aim specifically at reduction or elimination of the percentage of undesirable red and immature bunches, which are a contributing cause to inferior quality.

Cincturing, topping, and pre-harvest irrigation considered in conjunction with the general standard of routine practice, the nature of the season, and the climate of the producing centre may be considered as affecting quality more generally.

DRYING APRICOTS.

The Usual Procedure Described.

In many districts Apricots will be ready for drying this month. To secure the best article the fruit should not be pulled until fully ripe, but not over-ripe. The general procedure is to pick the fruit carefully into cases when it is fairly soft, as in that condition it makes the best article. It will be necessary to go over the trees several times, as the fruit does not all develop simultaneously. Too much stress cannot be laid upon the necessity for handling and picking the fruit carefully, and at the right degree of maturity.

As soon as possible after picking, the cases should be carted to the cutting shed, where the fruit should be most carefully and evenly cut in halves (not pulled apart) and the pits removed. The fruit should then be placed on trays with the cup side up, and as soon as possible each tray should be removed to the fumigator, where it can remain with the door closed until the fumigator is sufficiently full to start the sulphur burning. This is of great importance, as once the fruit has been cut it must not be exposed to sun or wind, or its appearance will be adversely affected. When everything is ready sulphur should be placed in the burner at the rate of approximately 1 lb. to 200 cubic feet of room space. If possible allow the fruit to remain in the sulphur room from eight to ten or twelve hours, or until the cup is full of juice. The trays of fruit can then be taken from the fumigator and placed on the drying ground.

ORCHARDISTS!

TO OBTAIN THE BEST RESULTS

Use the Right Spray
at the Right Time

"YARRA" BRAND SPRAYS

are the cheapest, most effective and — economical on the market —
We manufacture a complete range — of Sprays for the Orchardist —
including Arsenate of Lead (paste and powder), Lime Sulphur, Red Spraying Oil, Copper Soda Mixture, Benzole Emulsion, Spray Spreader etc., etc., etc.

Prices and particulars on application to

PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street
155 Yarra Street
Abbotsford, Vic.

T. STOTT & SONS

Fruit Merchants

Established 1882

A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

11 WESTERN MARKET, Melbourne

Guard Against Dust.

When the sun is the sole or main drying agent, a drying ground should be provided, and to facilitate and provide for economical working the ground must be laid out in such a way that the fruit can be carried on trucks to any part of the ground. It is one of the essentials of the drying ground that it should be as free as possible from dust.

When stone fruit is being dried it is better not to leave tracks or paths between the trays, but to cover the whole of the ground so that there are only the outside trays to watch. The borders and any paths that are left should be kept well sprinkled with water. Growers are advised to get the bulletin on "Fruit Drying" issued by the N.S.W. Department of Agriculture; the price is 10d., post free.

When drying whole Apricots only the best specimens should be selected, as small fruits are little else than skin and stone when the drying process is completed, and the placing of inferior fruit on the market always tends to spoil the sale of the superior article. The quality of the whole dried Apricot is superior to that of the split fruit, and if treated in the right way it contains less sulphur.

Treating Whole Fruit.

One of the most successful methods of dealing with whole fruit is to pass it through a boiling caustic soda solution (1 lb. caustic soda to each 30 gallons of water). The fruit should be dipped quickly—immersed for about two seconds—and after draining passed through a cold water bath to remove the excess of caustic soda. The wash bath is important, as it tends to reduce the amount of sulphur absorbed by nearly 50 per cent. as compared with unwashed fruit.

The fruit is then placed on the drying trays, care being taken that each fruit is put on its side; this gives a flat, large-sized product. Fruit placed either on the apex or base dries out an uneven shape, and the stone in many cases breaks through the skin. When sufficient trays are filled they are placed in the sulphur house or box, and submitted to sulphur fumes for eight or ten hours. From the sulphur box the fruit is spread out in the sun to dry, and the process can be completed in the shade. There is no danger of dipped fruit blistering, as whole Apricots do when not dipped and placed directly in the sun. The fruit should be ready to take off the trays in from eight to twelve days.

PERSONAL

Colonel and Mrs. Lambert White, of Hull, England, celebrated their golden wedding on November 7, 1927, and were the recipients of many valued expressions of affectionate remembrance from relatives and friends, and of goodwill and esteem from business friends, especially the British fruit trade.

The White firm has been in the fruit auction business for 90 years.

Western Australia

Fruit Crop Reports and Prospects :: Districts Notes

WESTERN AUSTRALIAN FRUIT.

Apple Crops Reduced by Thrips and Weather.

The Superintendent of Horticulture (Mr. Geo. W. Wickens), has supplied the following report as at December 16.

Apples.—During the past four weeks I visited many orchards in the principal Apple-growing districts in the State, and have ascertained that the reports current as to the lightness of the crop have been in no way exaggerated.

Many different agencies have been named as the cause of the failure, such as:—

(a) Thrips;
(b) Bad weather conditions, both at setting time and also during last autumn;
(c) Lack of frost in winter;
(d) Scarcity of bees in spring; and
(e) The very heavy crop of last year, leaving the trees in too debilitated a condition to permit them to set a crop again this season.

I must frankly confess that I cannot place my finger on any one of these and say I believe it to be the sole cause, for although there is a remarkable uniformity in the scarcity of Apples throughout the State, the details are widely varied. Trees with heavy crops. medium crops, light crops and very many with no crop at all, not even a single Apple, are to be found in the same orchards, and comprised of the same varieties.

There is no doubt thrips caused considerable losses at Mount Barker, where it was present in plague form, but in other districts where this pest was not much in evidence, the trees also failed to set a normal crop.

Again, if bad weather conditions are entirely to blame, how is it that some trees in nearly every orchard have escaped injury, while others are entirely barren of fruit?

Frost may have been absent during winter in some of the Apple-growing districts, but I know from personal experience this does not apply to Manjimup, where I saw ice still unthawed at 10 a.m., and Manjimup the crop is very light.

Bees may have been scarce in many orchards, but the light crop obtains even where bees were observed to be numerous at blossoming time.

The abnormally heavy crop of last season must affect the total quantity produced this season and cause a lesser production, even if there were no other contributing causes, but this does not explain why vigorous healthy "Dunns," which failed to crop last season are equally as barren as those which carried very heavy crops.

Personally I incline to the belief that it is the sum of the adverse conditions named above, with, perhaps, some other unknown factor added thereto, that has caused our Apple crop to fail, rather than any one special circumstance.

Crop Estimates.—One of the objects of my tour through the Apple districts was to furnish an estimate of the crop, and though I have done this annually for a number of years, I have never before experienced so much difficulty in arriving at a conclusion. When the crop is fairly uniform, whether light, medium or heavy, it is comparatively simple to make a fairly accurate estimate, but when acres of fruitless trees are mixed up with some carrying heavy crops, and some light crops, the task is anything but easy.

Mount Barker is the worst affected, and I estimate the crop in that district as being only 18 per cent. of normal.

The South-Western districts—Argyle, Donnybrook, Preston, Balingup, Bridgetown, etc., are better off, and though there are some orchards with very few Apples, the production ranges from 20 per cent. to 50 per cent. of normal.

For the past six seasons—1921-22 to 1926-27 inclusive—the Apple crop in Western Australia has ranged from 517,247 bushels to 901,464 bushels, as follows:—

	Bushels.
1921-22	538,175
1922-23	758,998
1923-24	517,247
1924-25	656,881
1925-26	524,391
1926-27	901,464

It will be noted how regularly a heavy crop has been followed by a medium crop, but this season I estimate there will only be from one-half to three-fourths the quantity usually harvested on the medium-crop year—that is, the aggregate production will be somewhere between 250,000 and 300,000 bushels. If I am correct this will be the lowest yield since the season of 1915-16, when 292,500 bushels were produced.

Other Fruits.—Of the fruit crop generally, it may be stated that Apples are the only kind of fruit which is not being produced normally this season.

The Pear crop is good throughout the State, "Bartletts" in particular, being heavy. Unfortunately black spot (Venturia pyrina) is very prevalent this season, and will lessen the quantity suitable for export purposes.

Stone fruits—Nectarines, Peaches, Apricots, and Plums—are all producing normal crops, and the viticulturist advises that the Grape crop is good, being quite equal to last year.

"Harvey's" Double Furrow Orchard Plough

"Harvey" Double Furrow Vineyard and Orchard Plow. (Model B7).

The **"HARVEY" DOUBLE FURROW VINEYARD PLOW** is light, short, strong, and durable, and suitable for two light horses. It is fitted with high channel steel goose-neck beams, and shifting head rack. Means are provided that the draught can be shifted to any point desired, by a double chain pull with grab link, which enables the horses to work to one side when backing off or ploughing on. The draught on the head rack may be raised or lowered, according to the hardness of the ground to be ploughed. The land wheel may be set in or out as desired, so that when backing off vines, this wheel is inside the line of the back furrow. The levers are low down when at work, as shown.

The Hardest Ground can be Worked with Comparative Ease.

Further particulars from

D. HARVEY, Whitehorse Road, Box Hill, Melbourne

Agents all States.

It is too early yet to forecast what the Citrus crop will be as the usual shedding of young fruits has not finished, but the outlook for a good crop is distinctly promising.

So, although the Apple crop is most disappointing, there will be no shortage of fruit of other kinds, and these will enable the citizens of Western Australia to continue to indulge in the health-giving practice of using fruit as one of the principal articles of diet.

MT. BARKER, W.A.

This district has suffered a severe setback through the ravages of thrips. It is now possible to make some estimate of crops, and the general opinion is that crops will only be 10 per cent.

MARGETSON
& CO. LTD.

Fruit Importers & Salesmen

30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL
Head Office—Covent Garden Market, London, W.C.
Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.

Shipping Nos.
431 and 432

of normal. It is some 12 years since thrips have done such heavy damage to Apples, the only varieties showing a setting being Cleopatra and Granny Smith, and most of these are misshapen and thrip marked.

There will be practically no export from the district, and no long storage of fruit. Doubt is expressed in some quarters as to whether thrips were the sole cause of the crop failure, but judging from the marked fruit on the trees, experienced orchardists consider that thrips were entirely the cause. Indications show that where oil was used as an early winter spray, setting was somewhat better, but evidence is too inconclusive. It is not yet known whether it will be necessary for fruitgrowers to ask for Government assistance, or whether the usual channels of credit will suffice.

Powdery mildew on Apples and black spot on Pears have been very bad this season, and numbers of orchardists are still spraying for the former. Good steady demand has been evident for long-storage fruit—but the local cool store will soon be empty.

Cherry picking is about finished—crops very generally good.

Other stone fruits are fairly light, particularly Apricots.—G. R. P. Wall, Mt. Barker.

MOUNT BARKER FRUIT CROPS.

Mr. Archd. T. Booth, Hon. Sec. Mt. Barker Fruitgrowers' Association, writing on December 10, states:—I am sorry to report that our fruit crop will be lighter than any year for the past 20 years, and we shall only have from a 15 to 20 per cent. crop. From other reports received there is no doubt that this district is suffering more than any other, but we know that we certainly had a greater visitation of thrips, and it is the universal opinion that this visitation did the bulk of the damage.

AUSTRALIAN FRUIT.

Comments by an English Buyer.

Some interesting comments on the export of Australian fruit were made recently Mr. R. J. S. Minear, a member of a wholesale fruit firm in Covent Garden, London, when interviewed at Fremantle on his arrival from South Africa by the s.s. "Ascanius." He said that West Australian fruit, particularly Apples and Pears, enjoyed a very high reputation, and would compare very favorably with fruit in any other part of the world. The cases in which West Australian Apples were exported were considered by the English buying firms as infinitely better packages than those in which Tasmanian fruit was exported.

On the journey to Australia, Mr. Minear spent about five weeks in South Africa, where he studied the fruit industry as thoroughly as time would permit. Less than 1,000,000 cases of Oranges were exported from South Africa last year, but it was estimated that within the next five years the exportation to the United Kingdom would be increased to 4,000,000 cases. South African fruit growers had adopted packing and grading methods identical with those of California. It would interest Australian producers to know that the estimated exportation for this year of deciduous fruit, such as Pears, Nectarines, Grapes, Peaches and Plums, was 2,500,000 packages. The South African growers' great advantage was that they were about half the distance that Australia was from England.

New Zealand growers, Mr. Minear said, were shipping to London some fine varieties of Apples, notably Dunn's seedlings, Jonathans and Cox's. In the opinion of the English import trade, Tasmania exported a far greater quantity of Apples than she should, and it was very evident that quality was suffering as a result of the huge quantities sent to the overseas markets. In the interests of the industry it was very desirable that stricter supervision should be exercised over the export of fruit from Tasmania.

Mr. Minear expressed his conviction that the advertising campaign conducted in the United Kingdom in favor of Empire fruit had put an entirely different complexion on the fruit industry. The publicity given to Empire fruit had been followed by most encouraging results, and the reception and cordial feeling expressed by the purchasers when buying Empire products spoke volumes for the activities of such bodies as the Empire Marketing Board. At no time had the trend of thought been so pronounced by the public of Great Britain towards a desire to give preference to Empire products, and that had been mainly brought about by the advertising propaganda. The public was very responsive in its support of good, wholesome products which had their origin in the Dominions.

HAMBURG
(GERMANY).

Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

It is expected that 2,000 tons of Peaches will be processed at the Kyabram Cannery this season, for which £12 a ton is being paid.

Importation of Foreign Citrus Fruit.

Prohibition Urged.

Action by N.S.W. Fruitgrowers' Federation.

THE GROWER of fruits of all kinds is faced with the necessity of a heavy financial outlay each year in his efforts to control the multitude of diseases and pests which attack fruit trees and fruit. The majority of the diseases and pests are imported ones, and as the industry has now developed to such a stage as to become an important national asset, it is time that some drastic action should be taken to keep out further diseases.

For some time past the Fruitgrowers' Federation of N.S.W. has been endeavouring to induce the Federal Government to totally prohibit the importation of Citrus fruits, owing to the danger of the introduction of further diseases. The principle involved is already accepted, inasmuch as the importation into Australia of Apples and Pears is prohibited because of the danger of the introduction of Fire Blight. The N.S.W. Government, in regard to the Murrumbidgee Irrigation Areas, has gone further than this, and has prohibited the introduction of any fruit into the irrigation areas, owing to the danger of introducing diseases.

It would, therefore, appear that the growers' request in this matter is a reasonable one. The efforts of the Fruitgrowers' Federation of N.S.W. have met with a degree of success in that a quarantine proclamation is in force which exercises a certain degree of control over the importation of foreign Citrus, and prohibits importations from countries in which Citrus Canker is known to exist. The question of diseases is so serious, however, that nothing short of total prohibition will satisfy growers.

From a commercial view-point the quantity of imported Oranges put on the market during a few months of the year does not materially affect local Oranges, but the consequent ever-present danger of the introduction of further diseases is a serious thing.

There are a number of diseases and pests known to be existent in America which are as yet unknown (or practically so) here, and included amongst them are some which cause much concern to American growers. Amongst these may be cited the "Citrus White Fly," considered in America to be a very serious pest (more so than all scale insects, being less amenable to treatment); "Citrus Grey Scale," also a particularly serious disease, as its mischief is aggravated by the fact that it attracts another disease known as "Black Smut," which does further injury; "Upland Mealy Bug," and the "Purple Scale," which is considered the most difficult of all scale pests to control, because of the resistance of the eggs to fumigation, and the fact that the scales are retained on the fruit, and thereby spread from one district to another. Bacterial diseases are always serious ones, and "Bacterial Gumming," "Citrus Blast," and "Citrus Pit" can also be named as being known in America and not in Australia.

In regard to "Citrus White Fly," considerable attention has recently been called to the prevalence of this pest in California, and to the tremendous sum of money being expended in an effort to control it. Recent issues of the "California Citrograph" report an appropriation of £8,000 by the State Legislature, and a further £8,000 from the California Citrus League to be expended in an effort to control this pest.

In spite of the continued urgent representations made during the past few years by Citrus growers throughout the Commonwealth, the Federal Government, instead of administering the Quarantine Proclamation 129 more rigidly, has recently modified it by the gazettal of a new proclamation (No. 174), published in the "Commonwealth Gazette" on the 20th October, 1927. The effect of the modification is that instead of effective fumigation of all Citrus fruits on their admittance into Australia, such fumigation may be carried out after picking, but prior to packing in the country of origin, and allows such fruit to be imported providing that a certificate to that effect is produced.

The Citrus growers of the Commonwealth will, no doubt, consider that they were justly entitled to be advised of the Government's intention, in order that their case could be presented before the gazettal of the proclamation, as it appears that the proclamation in its modified form is not sufficient safeguard against the introduction of further diseases. It is quite possible for fruit between the time of fumigation and packing to come into contact with disease affected fruit under conditions which may not be evident in the certificates required.

This matter generally is one that deserves much more serious consideration than appears to be given it by the Federal authorities. It is interesting to know the vastly different manner in which the U.S.A. deals with fruit which on rare occasions is forwarded to that country from Australia. The United States imposes what amounts to total prohibition on all fruits arriving from Australia, for whilst entry from some parts of the Commonwealth is theoretically permitted, experience has shown that the effect of the administration renders importations practically impossible.

Speaking generally, growers have sufficient faith in the administration of the Commonwealth Quarantine Regulations to realise that careful inspection is made, but it is considered

that the regulations do not go far enough, and nothing short of the total prohibition from the countries in which any disease not known in this country is existent will convince growers that they are safe from the introduction of further pests to add to the many now causing them such a tremendous outlay in money and loss of fruit from year to year.

In reply, the Federal Minister for Health has stated that under Quarantine Proclamation No. 174, the importation of Citrus fruits into Australia is permitted only under very restricted conditions, and the Chief Quarantine Officer in each State has been instructed in the thorough enforcement of these conditions. The Proclamation embodying the conditions is based on recommendations made by a Conference of Plant Quarantine Officers, Plant Pathologists, and other officials of the State Departments of Agriculture, and were considered by them to provide adequate safeguards against the further introduction of pests and diseases. Total prohibition is already provided for against importation of all Citrus plants, the only entry permitted being fruit or pips from countries where Citrus canker does not occur. Further, this fruit, which must be free from living disease or pests, is also fumigated before admission.

The Minister adds that the occurrence of white fly referred to as a serious pest of Citrus in some countries, has not escaped notice. It was reported in California 20 years ago, and the infested areas are now isolated under quarantine control. It does not occur in the main coastal belt. He considers that sufficient power is provided to deal with the possible introduction of any further Citrus pests, and that there is no necessity to make any alteration in the import conditions.

The matter generally will be considered at a future meeting of the N.S.W. Fruitgrowers' Federation, as in the meantime a number of affiliated organisations, particularly in the Hawkesbury district, have been asking that the matter be further reviewed. A Conference of the Metropolitan district will probably be held on January 7, and this subject will have a particular place on the agenda.

E. E. Herrod, Sec. N.S.W. Fruitgrowers' Federation

SOUTH AFRICAN ORANGE CROP.

The yield of Oranges in South Africa this year is reported to be turning out much better than was expected earlier in the season. A greater number of young trees are producing than was anticipated. The total export from South Africa this season will be 900,000 cases against 630,000 cases last year.

ORANGE DRINKS IN W.A.

New Company Provides Market for 30,000 Cases.

Orange growers in Western Australia are in a happier position to-day than they have been for many years, and speak in glowing terms concerning the installation in Perth of Orange drink shops controlled by the W.A. Orange Mill Co. Ltd.

A prominent Chittering Valley grower is reported to have said that for the first time on record he had been able to find a local market for the whole of his crop.

Sir Thomas Coombe, Chairman of Directors of the W.A. Orange Mill Co. Ltd., stated recently that Citrus fruit growers around Perth have nothing to fear regarding the future of their industry. Orange drink was becoming a highly popular beverage in Perth, and the business of the company had exceeded the most optimistic expectations. It was the intention of the company to instal at least six shops in Perth, and these would use over 30,000 cases of Oranges a year. The first shop to be operated was putting through over 100 cases a week.

Arrangements were now being made for the installation of electric refrigerating plants in order to maintain an even temperature throughout the year.

2,000 Cases in Cold Storage.

"Over 2,000 cases of Oranges, packed in specially prepared preservative paper, have been placed in cool storage for the summer months," said Sir Thomas. "Experience has shown that for juice properties, the 'Valencia' Orange is the best on the market, although the 'Joffre' Orange is very good. Our mills," he said, "crush not only the Orange and pulp, but the whole of the nutriment from the skin, which consists chiefly of iron and oil. It is recognised by the medical fraternity that Orange drink is not only refreshing, but possesses wonderful medicinal properties. The W.A. Orange Mill Co.'s juice has been analysed by the Board of Health, and declared as nearly perfect as possible."

Sir Thomas Coombe remarked that Lemon growers would shortly benefit as the result of the installation of the company's activities, as it was proposed to introduce a Lemon and Orange drink combined.

CEYLON TO GROW GRAPE FRUIT.

Considerable interest is being evinced in the possibilities offered by the cultivation of Grapefruit in Ceylon. Experiments have shown that Grapefruit can be grown very successfully on the island. Due to the demand for Grapefruit from a large number of Ceylon residents, a considerable quantity of Grapefruit is now being imported by cold storage from California. This local demand, combined with the demand from the numerous ships passing through Colombo, should guarantee a good market for locally produced Grapefruit.

The first Grapefruit plants were imported into Ceylon in 1913. These were distributed in various parts of the island, but nothing much appears to have been done in furthering the cultivation of the fruit until 1919. It was then decided by the Department of Agriculture that further trials should be made in the cultivation of Grapefruit, and a number of plants were put out at the experiment stations in Peradeniya and Anuradhapura. These trees produced heavy crops and demonstrated the practicability of cultivating Grapefruit in Ceylon.

Grapefruit seed has been obtained from Jamaica and Florida, and steps are now being taken to secure budded plants from the best trees at the experiment station in Peradeniya, as it is realised that Grapefruit of good quality cannot be obtained unless selection is rigidly adhered to.

F. W. Vear

Fruit & Vegetable Salesman

Commission Agent

WESTERN MARKET
MELBOURNE, VIC.

Highest Market Rates Assured

Prompt Settlements

COVENT GARDEN,
LONDON

Ridley, Houlding
& CO.,

Large Receivers of Australian Fruits.

Solicit Consignments of

Apples, Pears, &c.,

Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

New Zealand.

Fruit Crop Reports and Prospects :: Blister Disease of Apples.

NEW ZEALAND FRUIT CROPS.

Heavy Yields of Apples Expected.

The Director of the Horticulture Division (Mr. J. A. Campbell) advises on December 14, as follows:—The crop prospects as supplied by the field officers of this Division, and published regularly during the season, may be taken as a fairly reliable guide.

Summarised, the position generally is that all classes of fruit are at the present time showing good to heavy crops.

Apples.—An increase in the export of Apples is anticipated, and preliminary booking arrangements are being made for some 900,000 cases, as compared with 545,000 last year, and approximately three-quarters of a million the year before.

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

No drastic alterations are anticipated in the grading and packing regulations for the coming season, which will be much on the same lines as those previously operating.

These remarks are made before the actual picking season commences, and no one can say what may happen in the way of some unseasonable weather visitation or other trouble which may be experienced before the crops are ready for harvesting.

Stone fruit crops are particularly good this year, and are at the present time being gathered.

BLISTER DISEASE OF APPLES.

An investigation was made by the N.Z. Biological Laboratory into the causes of an obscure disease that made its appearance last season in certain parts of the Motueka fruit-growing district—the blister disease of Apples. The annual report on the work of the Laboratory states that although the lesions which occurred in the fruits showed the presence of a fungus—Coniothecium—this parasite was found to be of merely secondary importance. Certain physiological irregularities had been brought about by unfavorable soil conditions, weather conditions, and orchard management.

After closely examining the circumstances in which affected trees were to be found, the conclusions reached were that the rooting-systems were feeble through shallow rooting due to an impenetrable pan, through root-injury in cultivation, and through lack of drainage. The remedy recommended was to raise the vigor of the trees by various means, such as drainage, manuring, thinning, hard pruning, etc., according to the circumstances involved.

Another non-parasitic disease—brown-core of Apples—which showed itself in the form of brownish masses variously distributed in the pith and cortex of Apple fruit, was ascribed to similar causes, and was probably precipitated by the unusual weather conditions that preceded its appearance. There is little doubt also that the dying-back of Delicious and Sturmers that was unusually prevalent in this season was due to similar causes. There is no doubt that this investigation uncovered a group of conditions that have been insidiously operating against the orchardists on a very considerable area of country.—"N.Z. Journal of Agriculture."

DISTRICT NOTES ON FRUIT CROPS.

The Director of the Horticulture Division has received the following reports from his officers regarding orchard and marketing conditions at the end of November, 1927:—

Auckland. — **Apples:** Average to heavy crop. **Lemons:** Trees making splendid growth. **Nectarines:** Light. **Oranges:** Setting medium crop only. **Peaches:** Most varieties light. **Pears:** Rather below average. **Plums:** Under average.

Hawke's Bay.—**Apples:** Good, even, clean crop. Should be a record yield. **Apricots, Gooseberries, and Nectarines:** Average. **Cherries:** Good. **Peaches:** Early sorts light; others average to heavy. **Pears:** Below average. **Plums:** Average. **Plums** (Japanese): Heavy.

Nelson.—**Apples:** Most varieties a good average crop. Some black spot showing. **Apricots:** Light. **Cherries & Gooseberries:** Good. **Nectarines:** Heavy. **Peaches:** Heaviest crop for several years. **Pears:** Williams', good; Keiffer's, light; Winter Nelis and Cole, fair to good; other varieties fair to good. Black Spot slight. **Plums:** Medium to good.

Marlborough.—Apples: Good; a few heavy crops. **Apricots:** Good. **Gooseberries:** Good. **Nectarines and Oranges:** Good. **Peaches:** Good to heavy. **Pears:** Fair crops only; spot pronounced. **Plums:** Good. **Cherries:** Good.

Canterbury. — **Apples:** Heavy settings most varieties: very little spot showing. **Apricots:** Promising well. **Gooseberries:** Crops picking very well. **Nectarines:** Average. **Peaches:** Heavy. **Pears:** Good average crop, fairly free from spot. **Plums:** Good average crops; South Canterbury somewhat light. **Plums** (Japanese): Good.

Brand Your
Fruit Cases and Bags
with
CALDWELL'S
STENCILLING
INK
(In Cakes and Liquid)
QUALITY UNSURPASSED
Obtainable All Merchants
Local Agents Wanted
CALDWELL'S PTY. LTD.
Yarra Bank Road
South Melbourne, Vic.

Otago and Southland. — **Apples:** Heavy crop Delicious, Dunn's and Scarlet's short. Powdery mildew and black spot in evidence. **Apricots:** Heavy. Heavy infection brown rot. **Cherries and Raspberries:** Average. **Gooseberries and Plums:** Average. **Nectarines and Peaches: Light.** Peach curl in evidence in some orchards. **Pears:** Average with exception Winter Nelis, which is light.

TRAINING OUR YOUNG FRUIT PACKERS.

The Victorian Superintendent of Horticulture (Mr. J. M. Ward), visited Somerville during December to present to the Somerville State School the shield won for fruit packing at the last Royal Show competitions. This shield is the gift of the Victorian Fruit Exporters' Handling Committee, and is held by the winning school until the following year. There was a large attendance, and the function was a very happy one.

Cold Storage Problems.

Report of Investigations by Dr. F. Kidd and Dr. W. J. Young:—

Dr. F. Kidd, of the Low Temperature Research Station, Cambridge, and Dr. W. J. Young, Associate Professor of Bio-chemistry, University of Melbourne, have completed their inquiries in South Africa and the Commonwealth, and have furnished a joint report to the Council for Scientific and Industrial Research, outlining a scheme for the organization of investigations on cold storage problems, and dealing generally with the questions of equipment, personnel, and problems to be investigated. Research problems are considered under three main heads, viz., (i) Economic research; (ii) technical research; and (iii) fundamental research. The most important recommendations relate to the following matters, says the Council's "Journal":—

1. As regards economic and technical research, it is recommended that the Council should explore the possibilities of promoting and assisting the formation of industrial research associations.

2. Refers to meat problems.

3. As regards fruit, it is recommended that investigations be carried out on such matters as:—

(a) The reaction of fruits to temperature.
(b) Fungal diseases.
(c) Empirical storage trials for various methods of wrapping, sweating, sterilization, and packing.
(d) Behaviour of fruit in relation to exposure to air, sugar content, etc.

The importance of investigations on the production side is also emphasized, especially with respect to the improvement of yield by breeding, grafting, and by manurial and other soils treatments.

4. It is considered that at least four experimental stations would be necessary in order to meet the needs of the fruit industry in technical research.

5. It is recommended that a National Research Laboratory should be established by the Council for the purpose of carrying out fundamental research, and that provision for a tropical branch of this laboratory should be made at the proposed Tropical Agricultural Research Institute.

6. It is recommended that overseas transport investigations should be carried out by the Council in co-operation with the British Food Investigation Board.

7. It is recommended that immediate steps should be taken for the investigation of (i) bitter pit in apples; (ii) transport of chilled beef to Britain; (iii) overseas shipment of oranges; and (iv) Inter-State transport of bananas.

The question of the action to be taken for the initiation and development of investigations on cold storage problems is receiving the urgent attention of the Council in the light of the report furnished by Dr. Kidd and Dr. Young. A limited number of copies of the report are still available, and copies will be sent to persons specially interested on application to the Secretary of the Council.

NEW PACKING SHED AT GRIFFITH.

A new Citrus packing shed, built by the Griffith Producers' Company, was opened by the N.S.W. Minister for Agriculture, on December 3. The shed has a capacity of 2,000 bushels a day, and is described as having the most up-to-date Citrus-packing equipment in the southern hemisphere.

FRUIT PRE-COOLING TO BE TESTED.

A conference of fruitgrowers, exporters, representatives of the Commonwealth Department of Markets, the Development and Migration Commission, the Council for Scientific and Industrial Research, and others interested in the overseas marketing of fruit, was held in Melbourne on December 9, under the chairmanship of the Acting Director of Agriculture (Mr. R. Crowe), to consider the question of pre-cooling Apples and Pears for export.

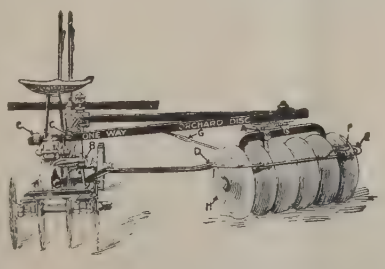
After considerable discussion, it was decided that experiments in pre-cooling should be conducted on a commercial scale this season, three pre-cooled consignments being shipped with similar untreated fruit for comparison.

The vessels to be utilised, and the arrangements for supervision of temperatures were left to an advisory Committee, consisting of Messrs. J. B. Mills (Fruit-Handling Committee), J. Tully (Fruit Cool Stores Association), J. W. Bailey (Apple and Pear Growers' Association), J. Hepburn and J. M. Ward (Department of Agriculture), and Dr. Young (Council of Scientific and Industrial Research).

KYABRAM CANNERY.

In order to assist the Kyabram Co-operative Fruit Preserving Co. to carry over a difficult period, the Government has agreed to advance sufficient to cover this season's processing operations, the shareholders agreeing to the appointment of an advisory Executive Committee, and the increasing of the capital by £10,000.

The South Australian Dried Fruits Act has been amended to provide for its more effective working, and to bring it within the provisions of the recent High Court decision.



"Harvey" One Way Orchard Disc Cultivator.

SIX IMPLEMENTS IN ONE

"Harvey's" One Way Orchard Disc Cultivators

CAN BE CONVERTED INTO

ONE WAY DISC: SPRING TYNE CULTIVATOR:
TWO WAY DISC: LIGHT 3-FURROW PLOW:
CUTTING RAKE: IRRIGATION FURROWER.
Reversible to Throw to or from the Trees.

Cuts deeper. Will enter and thoroughly work harder ground than any other disc made. Will work right up to spreading trees where no other implement will reach, driver and team being clear of the branches.

Further particulars: Agents all States.

D. HARVEY, Whitehorse Road, Box Hill, Melbourne

Canning Fruit Notes

PRESERVATION OF WHOLE FRUIT WITH SULPHUR DIOXIDE.

(By J. M. Arthur, Orchardist, and M. S. Benjamin, D.I.C., A.A.C.I., Lecturer in Chemistry, Hawkesbury, Agricultural College, in the "Agricultural Gazette" of N.S.W.).

SULPHUR DIOXIDE, as well as its various compounds, such as bi-sulphite of potash, bi-sulphite of lime, has long been used for the preservation of wines, beers, fruit beverages, and various articles of food. Sulphur dioxide has also been employed to some extent for the preservation of fruit pulp.

At the suggestion of the Fruit Branch, some experiments were recently carried out at the orchard at Hawkesbury Agricultural College with a view to determining if whole fruit could be suitably preserved under local conditions by the use of dilute aqueous solutions of sulphur dioxide. Similar experiments were some time ago carried out by Barker & Grove at Campden Fruit Research Station, Glos., England, and are described by those workers in a recent issue of the "Journal of Pomology and Horticultural Science," (December, 1925). In the experiments referred to, satisfactory results are reported as having been obtained in the preservation of Raspberries, Blackberries, Strawberries, Plums, and other fruits by the use of this preservative.

The following is a brief report of preliminary trials at Hawkesbury Agricultural College, and of the results obtained so far with Plums and Grapes.

Trials with Plums.

Trials with Plums were commenced on 13th January, the variety used being Cyca Smomo (a blood plum). Half-gallon screw top jars were used, being filled with fruit of uniform size and maturity.

Aqueous solutions of sulphur dioxide, with concentrations of 0·08, 0·09 and 0·10 per cent. respectively were prepared. These solutions were poured over the fruit contained in three separate sets of jars, which were subsequently labelled sets 1, 2 and 3. After the solutions had been added the jars were tightly sealed, and the contents examined a week later. All the fruit was found to be in good state of preservation, but the skin had become considerably bleached.

The contents of sets 2 and 3 had developed strong acidity, while the fruit in set 1 was only slightly sour. A further examination made two months later showed that the fruit in all the sets was still fresh and sound, and that no fermentation had occurred, but it was still sour, and the skin, as well as the flesh, had undergone considerable bleaching, so that the latter was now a faint pink colour.

An attempt was then made to see whether cooking would restore the fruit to its natural colour, or diminish its acidity, the tests being—

(a) By heating portion of the fruit in an open boiler.
(b) By steaming portion while still in its container.

In both cases it was found that the natural colour of the fruit was partly restored by these methods, and that the acidity was considerably reduced. The restoration of the colour was more complete when the cooking was done in an open boiler than when in its container.

The experiments would seem to indicate so far that 0·08 per cent. sulphur dioxide solution was sufficiently strong for the preservation of the variety of plums tested, but it would appear desirable to try the effect of lower concentrations, say, ·06 and .04 per cent. of sulphur dioxide on these and other varieties of plums. It is proposed to do this next season.

Trials with Grapes.

Experiments with Grapes were also carried out. Four varieties were selected, namely—Gros Moroc (black grape), Gros Guillaume (black grape), Flame Tokay (pink grape), Waltham Cross (white grape).

On 24th February, 1927, three 1-quart jars of each variety were prepared and covered with the preservative solution, as in the experiments with plums. It was thought desirable in the case of grapes, these being more delicate fruit, to try the effect of more dilute solutions of sulphur dioxide. With this end in view, concentrations of 0·08, 0·06, 0·04, 0·01 and 0·008 per cent. of sulphur dioxide, which were labelled Nos. 1, 2, 3, and 4 respectively, were used.

The fruit was examined on 10th March, and it was noted that Nos. 3, 4 and 5 had undergone more or less fermentation. In the cases of Nos. 1 and 2, no fermentation could be detected, but bleaching of the skins in the case of the coloured grapes had occurred. The natural flavour of the grapes had been retained.

On 1st June (over three months after the fruit had been preserved) cooking experiments, on similar lines to those adopted with the plums, were carried out with Nos. 1 and 2, and the original colour of the black grapes was partly restored, but no change took place with the Flame Tokay variety. It remained quite bleached.

An interesting point was noticed with the black grapes. A control jar of grapes that was not cooked, but off which the lid was left, in twenty-four hours developed a similar colour to that of fruit that had been cooked. The probable explanation of this, and of the colour changes obtained when the fruit was cooked, is that sulphur dioxide has a slight reducing effect on the natural pigment found in the fruit, and on the removal of the excess sulphur dioxide, which is brought about when the fruit is heated or simply aerated, a re-oxidation of the pigment substance occurs, and the fruit is restored wholly, or in part, to its natural colour.

The changes observed naturally lead one to inquire whether, apart from its preservative action, sulphur dioxide has any direct chemical effect on other constituents of the fruit. In connection with this point it is interesting to note that some studies—vide "Journal of Pomology and Horticultural Science," December, 1925—have been carried out lately by Appleyard at the Campden Research Station, England, dealing with this aspect of fruit preservation with sulphur dioxide. It was found that the enzymes present in the fruit were inactivated by treatment with the preservative, just as such enzymes are inactivated or destroyed when the fruit is boiled during the process of manufacture into pulp. It has also been observed that the fruit so treated undergoes some loss in "jelling" powers when used in the manufacture of jam.

Further trials with different fruits and varieties are necessary in order to determine how far the method described is applicable and practicable under Australian conditions. If it should be found from subsequent investigations that ordinary varieties of Australian-grown fruits could be satisfactorily preserved in this way, this process would seem to compare more than favourably with other methods of fruit preservation in common use. It would, for example, allow of fruit being kept and marketed in a more attractive form than when it is reduced to pulp.

Apples, for instance, could be preserved whole or in sections, instead of being reduced to pulp, and the product would probably command a higher market value. Moreover, the preserved product could be used as an article of food in the same way as bottled or canned fruit, and the labor and time involved in its preparation

would be considerably reduced. In addition, surplus fruit obtained during a glut season could be stored and profitably utilised for jam manufacture, the labor and time involved in its preservation being less than that required to preserve it, as at present in the form of pulp.

FERTILISERS FOR PEACHES.

U. S. Experiments.

PEACH growers will be interested in these experiments with fertilisers and Peaches conducted by the Georgia Experiment Station (U.S.A.).

The relative effects of seasonal conditions and fertilisers on keeping qualities of Peaches in storage have been noticed.

The Georgia Experimental Station, in co-operation with the U.S. Department of Agriculture, has been conducting fertiliser experiments with Peaches for six years. Twenty-one different fertiliser formulas were used. Nitrogen was used from four different sources. For five years the experiments were conducted on the farm of L. B. Ruph, of Marshallville. In 1927, the experiments were conducted on Piedmont soil in the orchard of O. T. Moreland, near Griffin.

Nitrogen and Peaches.

There was a direct relation between the amount of nitrogen used and the number of Peaches set per tree. In 1925, trees receiving 10 lbs. of fertiliser with 10 per cent. and 12 per cent. nitrogen, produced 462 Peaches per tree, trees receiving 10 lbs. of fertiliser with 6 per cent. nitrogen, produced 431 Peaches each, while trees receiving no nitrogen produced 207 Peaches per tree. However, in 1927, the condition was reversed, due to a freeze which came just following the time of blooming. The trees which received 10 per cent. and 12 per cent. nitrogen produced only 27 Peaches per tree, trees receiving 6 per cent. nitrogen produced 34 Peaches each, and those receiving no nitrogen produced 88 Peaches per tree. Nitrogen seems to be the determining fertiliser element, but when more than 8 per cent. is used in a fertiliser, with 10 lbs. applied each tree, the foliage becomes too dense for the fruit to color well, and the young fruit seems more susceptible to late winter freezes. From 4 per cent. to 6 per cent. stimulates sufficient growth for the tree to set the desired number of fruit.

Ripening Delayed.

Nitrogen delays ripening of Peaches. In 1927, trees receiving no nitrogen completed ripening their crop on the day of the first picking from those trees receiving a fertiliser mixture containing 12 per cent. nitrogen. Thus far no consistent differences have been found between nitrogen derived from nitrate of soda, sulphate of ammonia, cotton seed meal, and dried blood. The amount of rainfall between the time of application of the fertiliser and the harvest of the Peaches may alter the effects from year to year.

Potash and Vigour.

Potash has been found to contribute to the general vigor of the tree and to ensure a better set of fruit. In 1925, trees receiving 10 per cent. and 12 per cent. potash produced 442 Peaches per tree. Trees receiving 6 per cent. Potash produced 292 Peaches per tree, and those receiving no potash produced 207 Peaches per tree. In 1927, trees receiving 10 per cent. and 12 per cent. potash produced 74 Peaches per tree, and those receiving 6 per cent. produced 54 Peaches per tree. It has also been found that potash prolongs the life of fruit in storage.

Acid phosphate has produced practically no effect on the number of Peaches set per tree or on the size of the fruit. It has likewise been negligible in prolonging or shortening the life of Peaches in storage.

Seasonal conditions during the growing period of the crop play a greater part in determining the keeping qualities of Peaches in storage than the kind of fertilizer used.

A NEW NECTARINE.

A new fruit known as the "Quetta Nectarine" is now being produced commercially in California, according to a statement issued September 19 by the Department of Agriculture.

The Department recommends the new fruit for cultivation in numerous States. It is described as having all the qualities of a first-class Peach with the added advantage of a smooth skin, handsome coloring and a rich aroma.

The statement, in full text, follows:—

An English officer at Quetta, in north-west India, sent several seeds to the United States Department of Agriculture. Of the seedlings, only one plant produced a desirable fruit. The experimenters propagated this good Nectarine by budding on hardy Chinese wild Peach stock which resists cold better than the ordinary Peach.

Several thousand trees and buds have been distributed to experimenters in California and in other States, and are now available in the commercial trade. An added advantage of the Quetta variety over the ordinary Nectarine, is its smooth and firm skin which adds to the shipping quality of the fruit.

AMERICA'S EXPORT TRADE IN CANNED GOODS.

The value of the principal exports of American canned fruits for 1926-27 amounted to £14,385,000, showing a 2 per cent. increase on the previous year.

Salmon and sardines showed considerable gains. Canned fruits reached a total of £6,144,200, and canned vegetables £1,811,600. The United Kingdom continued to be the largest market for both fruit and vegetables.

Irrigation Hose in heavy Finest Scotch Duck

	A	B	C
3-inch	5d.	6d.	7d. per foot.
4-inch.	6d.	7d.	8d. ,, ,,
5½-inch	7½d.	9d.	10d. ,, ,,
7-inch	10d.	12d.	13d. ,, ,,
9-inch	14d.	17d.	18d. ,, ,,
11-inch	16d.	18d.	19d. ,, ,,

HAY STACK COVERS

For Hay and Lucerne Stacks, etc.

	3-Star.	4-Star.
12 x 20	£2 3 0	£3 1 6
12 x 24	2 13 6	3 15 0
18 x 20	3 15 0	4 11 0
18 x 24	4 2 6	5 9 0
18 x 30	5 2 0	6 15 0
21 x 30	5 17 6	7 17 6

Any other size at same rates. Ropes, 3/6 Extra.

Verandah Blinds, Window Blinds, Duck Tarpaulins, Tents, Camp Stretchers and all Classes of Canvas Goods.

Large Stocks of First-class Secondhand Sacks.

Please write for prices and samples.

WYETT MFG. CO. PTY. LTD.

21-23 BELLARINE STREET, GEELONG, VICTORIA.

'Phone 1688.

South Australia

Fruit Crop Prospects. The Outlook Good.

FRUIT CROPS IN SOUTH AUSTRALIA.

General Report for November and December, 1927.

(By Geo. Quinn, Chief Horticultural Instructor.)

Apples.

APPLES have set a good crop in all fruitgrowing areas. Of the principal export kinds, **Cleopatra** is uniformly heavy, **Jonathan** good to heavy, **Dunn's** light in most orchards, **Rome Beauty** heavy in some districts, light in others. **Spitzenburg** and **Scarlets** heavy where grown, and most other sorts good.

The trees look healthy after the previous season's rest from cropping, and the recent rains have increased their chances of developing the present crop. These rains have, however, started the Fusicladium (Black Spot) into activity in the damper hilly localities, and growers are resorting to Lime Sulphur sprays in hope of checking its spread without unduly russeting the skins of the fruits. Thus far, the Codlin Moth caterpillars are not much in evidence in most orchards, and few moths are being caught in lure traps. In a low-lying area, in one district, a very late spring frost destroyed most of the Apples and Pears in three or four orchards after the fruits had become well set, and attained the size of ordinary grape berries. This is a most unusual experience in this State. There has been a keen demand from overseas for Apples, and many thousands of cases have been sold already for the coming season's shipments.

Unless the Black Spot or some unforeseen misfortune very drastically affects the progress of the crop, the yield of Apples in this State should equal, if not exceed, that of the record season, which was statistically given as 1,143,274 bushels.

Pears

are displaying a good crop in nearly all commonly grown varieties. Conspicuous amongst these are **Williams'** (erroneously called Duchess in this State), **Packham's Triumph, Glou Morceau, Josephine de Malines,** and **Clapp's Favourite.** The Black Spot fungus has attacked some of the Pears, but serious consequences are not feared unless the summer season proves moister than usual.

Apricots

suffered severely from late September frosts just at the setting time. In the irrigation areas the yield will be extremely patchy, as only trees standing well up on the sandy slopes escaped an almost total loss. In the Barossa—our principal Apricot producing district—a few orchards which escaped these visitations of extreme cold have splendid crops. The fruit is reported as promising to be somewhat small, though recent rains will no doubt improve them in this respect. Other districts report fair crops.

Cherries

are carrying the best crop they have borne for several years past. The trees, however, in most orchards where they are making good growth, are attacked by **Black Aphides (Myzus cerasi),** which mat together the terminal leaves and suck them pale.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

These pests secrete exceptional quantities of honey dew, which, in some instances, has besmeared and quite spoilt the market value of the Early Lyons and other early ripening kinds.

This pest has only become a nuisance during recent years, and the growers are now awakening to the need for giving the matter serious attention. Cherry growing in the ranges behind Adelaide proved for many years an easily raised crop, but with the advent of the Shothole fungus during the wet summers which followed the drought year 1914, backed up by the advent of the Cherry Slug, which came into notice at that period, the number of trees declined and the production fell away. This Aphis visitation will either deteriorate the industry further, or arouse the growers to greater efforts and possibly result in its resuscitation.

Peaches and Nectarines.

The peach crop, wherever it escaped the frosts at setting time, will be fair to good, and the same applies to that of the nectarine trees. Few Clingstone canning Peaches, however, are grown in this State, and the local canneries have, since the demand swung towards the clingstones, had to draw their supplies by rail from the Goulburn Valley districts in Victoria.

Plums and Prunes

were in some localities injured by frost at the setting time, but where this did not occur, the ordinary plums are from fair to good, and the drying varieties (prunes) promise for a good crop. Many Japanese hybrid sorts are showing good yields. There is no disease at present threatening these fruits.

Figs

had their Spring crops mostly destroyed by frost, but the promise for the Summer or main crop is up to the average.

Quinces

are showing a good crop.

Nuts.

Walnuts were frosted in some districts; in others they are cropping in a normal manner; but this product is not largely grown in this State, as the Basteriosis ruins a large proportion of the nuts in the cooler districts.

Almonds are giving promise of a fair yield on many of the varieties. Some localities, however, suffered loss through frosts.

Berry Fruits.

Gooseberries are heavy, and **Raspberries** also promise a good return. Both of these, as well as Red and Black Currants, are merely grown in sufficient quantities to supply local needs.

Strawberries. — The Strawberry crop is fair and late rains will augment the second ripening. This fruit is grown in diminishing quantities in this State, owing chiefly to the presence of a disease—not yet defined—and the lack of moisture during our average summers.

Tomatoes.

The Tomato crop has been from fair to good in the glasshouses, and trained outdoor fruits will take up the supplies, which will soon finish in the glasshouses. Following these in the late summer and autumn will come the outdoor, unpruned and bush grown Tomatoes planted for factory purposes. The Spotted Wilt disease has not thus far caused any general complaints from Tomato growers, but

Cutworms have been troublesome in some quarters.

Citrus.

Of Citrus fruits, the **Orange** harvest is just about completed, a few late Valencias and Compudas being held for the holiday season. The newly-set Orange crop has fallen severely from the trees in the Murray Valley, due, it is considered, more to the rapid changes of temperatures experienced this summer, rather than to injuries received from Spring frosts. In the coastal districts, the late frosts cut many Orange trees, destroying the young fruits for about 6ft. from the ground surface. Above that, a fair show of young fruits may be noted.

Mature **Lemons** are scarce, and the growing fruits on the trees are being picked close up to any marketable size, owing to good prices offering.

Viticulture.

In the vineyards of the Murray Valley the disastrous freeze of late September cut the **Sultanas** and **Currants** badly in all places, excepting protected hill slopes. In most vineyards it is doubtful if more than 5 per cent. of a normal yield will eventuate from these sorts. The **Doradillos** are light—not frosted, but taking a spell. The **Gordos** or **Muscatels** are promising a good crop in most of the South Australian Irrigated areas.

In the coastal unirrigated areas, most sorts of grapes are promising from fair to good crops, and thus far no disease has appeared, excepting that Thrips are suspected of reducing the setting on one or two varieties. The recent rains, however, unless followed by drying winds and hot weather, may be calculated to arouse the dormant spores of Downy Mildew, Oidium and Black Spot. Most vignerons are fairly alive to the possibilities likely to arise therefrom, and have made preparation to take further preventive measures at short notice.

Classified Advertisements

Wanted and For Sale.

Casual Advertisements, one to six words, 2d. per words. Contract Advertisements, twelve months, 1½d. per word.

TO AGENTS AND EXPORTERS.

The late Manager of a leading firm of Wholesale Fruit Merchants in England desires a position of trust. Excellent credentials. In personal touch with most leading merchants in Great Britain and France.

DAVIS.
Station Estate, Dandenong, Vic.

FORDSON TRACTOR FIRST TO RUN ON ROMA OIL.

How well the Fordson tractor seems to know its place—and hold it! First choice with the great majority of tractor users, it was only to be expected that it would be the first tractor in Australia to run on oil actually produced from the soil of this Continent. To date there has not been overmuch pure petrol taken from the Roma oil bore, but the Fordson was quickly on the spot to get a "Fill-up," and gave an interesting demonstration of what could be accomplished by it with "dinkum Australian oil."

The result is that an interesting series of photographs are going the rounds of the illustrated Australian press, showing Mr. Lou. Borland, of the Maranoa Trading Company Ltd., of Roma, Queensland, receiving a quota of oil and demonstrating its power with a Fordson. The test was witnessed by Mr. Evans, Manager of the Roma Oil Corporation as well as by many others. The photographs in question possess two interesting features. They show the method of coupling up the Rotary hoe cultivator and the significance of a tractor running at last on oil produced in Australia.

Dennis & Cooper Ltd.

COVENT GARDEN,
LONDON, ENGLAND.

Fruit Brokers and Commission Salesmen.

Make your Shipments of **APPLES** through

A. W. BOWEN & CO. Commercial Buildings,
9 FRENCH STREET,——————ADELAIDE.

who will give all information.

FINANCIAL FACILITIES OFFERED.

INSECT PESTS OF AUSTRALIAN DRIED FRUIT.

References have been made from time to time to the visit to Australia of Dr. J. G. Myers, D.Sc., F.E.S., of the Imperial Bureau of Entomology. The funds for the visit were provided by the Empire Marketing Board and the Council for Scientific and Industrial Research in equal proportions. It was undertaken in order that an examination might be made of Australian dried fruit—currants and raisins—throughout all stages, from its production in Australia to its marketing in Great Britain, and particularly from the point of view of the possible total prevention of the small amount of infestation of the fruit by grubs, that now sometimes takes place.

The following notes are reprinted from the Council's journal:—

Grub infestation of dried fruits is a problem of a world-wide nature, and is by no means limited to Australia. Unfortunately, a number of varieties of grubs propagated by moths are peculiarly adapted to a life in dried fruits. The latter material is thus in danger of infestation from the time the fruit is dried in the producing areas until the time it is eventually consumed. Australian fruit found to be infested in other countries may quite possibly have left Australia in a clean condition, and have become infested in the countries of consumption. Fortunately, methods are slowly being evolved by which grubs may be combated, and not the least potent of these is a general dissemination among all consumers of the knowledge that certain varieties of moths can rapidly lay sufficient eggs to infest dried fruit badly if the latter is exposed for but a short time.

Dr. Myers has now furnished a report of his visit, and of the work he carried out in Great Britain at a subsequent date. Many of those engaged in the Australian dried fruit industry have introduced various processes, and have patented them. The various authorities concerned with the packing and export of the fruit also adopt different methods and regulations. All these are discussed by Dr. Myers. Briefly, he is of the opinion that regulations recently adopted have, in many instances, led to a marked lessening in insect infestation. In other cases, he points to the desirability of altering the regulations and conditions of packing in certain directions.

A summary of his report is as follows:—

1. By far the most important pest of Australian dried grape fruits is **Plodia interpunctella.**

2. Another moth and a beetle are fairly important, but attention should be concentrated on **Plodia,** since its elimination would nearly always involve that of the others.

3. The larvae of **Plodia** are neither "grubs" nor "maggots," but more correctly caterpillars.

4. **Plodia** lives on a wide variety of dried food products, and is nearly cosmopolitan in distribution.

5. By far the most important factor influencing the duration of the life-cycle in **Plodia** is temperature.

6. The cycle may vary from 31 days in the hottest part of the Australian summer to many months, if winter intervene.

7. **Plodia** is essentially now an indoor insect. It spreads but little by its own efforts.

8. There are probably two broods per year in Australia, but individual variation in development obscures these greatly.

9. Fruit shipped in late autumn or winter, and meeting hot weather in the tropics, will arrive in London in the same State with regard to "grubs" as that stored in Australia till the end of January.

10. Ephestia cautella is common in the raisin districts; but is attracted chiefly to unpacked fruit, whence it is largely eliminated by the stemmer and grader, so that it is almost negligible as a factor in the final London infestation.

11. **Silvanus surinamensis**—a small beetle—is, next to **Plodia,** the most abundant insect in Australian dried fruit, but it infests chiefly fruit which has been previously attacked by **Plodia and Ephestia,** or has been stored a long time.

12. At least so long as the present cleanliness regulations are enforced, drying-rack infestation by **Plodia** is commercially negligible.

13. The bulk of the infestation occurs after the fruit is packed.

WHAT ADVERTISING CAN DO.

The advice seen on every hand to buy Australian dried fruits has resulted in the sales reaching a record, totalling £250,000 in value during the first half of September, says an English exchange. In one week 3,000 tons of Australian dried fruits were sold on the British markets, and it is believed that the sales of Australian Sultanas for the week ended September 30, amounting to 2,500 tons, constitute a record, not only for the Commonwealth trade, but also for the sales of Sultanas from all sources on the British market for one week.

Information regarding the control of codlin moth and instructions for spraying, are given by Mr. P. H. Thomas in our Tasmanian Section.

Trouble has a trick of coming butt end first,
Viewed approaching, then you've seen it at its worst.
Once surmounted, straight it waxes ever small,
And it tapers till there's nothing left at all.

So whatever difficulty may impend,
Just remember you are facing the butt end,
And, when looking back upon it, like as not
You will marvel at beholding just a dot.
—Edwin L. Sabine.

C. A. NOBELIUS & SONS
Pty. Ltd.

Growers of First-class
FRUIT TREES
ORNAMENTALS
Etc.

Retail Price List printed 1st March. Write for a Copy

Gembrook Nurseries - - Emerald, Victoria

'Phone Box Hill 154. Telegrams: Nobelius, Box Hill 154.

New South Wales

Fruit Crop Reports and Prospects Co-operative Marketing.

NEW SOUTH WALES FRUIT CROPS.

The Under-Secretary for Agriculture submits the following report regarding the fruit crops in New South Wales, under date December 14.

The setting of Apples in all the chief Apple-growing districts is particularly good, and growers expect to harvest heavy crops. The Pear crop will be much below the average. The trees blossomed well, but unfortunately inclement weather at the blossoming and setting periods prejudicially affected the setting. The following are the crop prospects of the chief commercial varieties of Apples and Pears grown in this State.

Apples. — Granny Smith, London Pippin, Tasma, Jonathan, Rome Beauty, Cleopatra, Fameuse, Macintosh, Gravenstein, Yates, Rokewood, good.

Delicious and **Dunns,** light to medium.

The yield of Apples will be approximately 1,200,000 bushel cases.

Varieties of Apples grown in this State, but not mentioned in the above list are, generally speaking, carrying good crops.

The five varieties mentioned first are grown extensively in New South Wales, and contribute a generous quota to the State's annual crop.

Pears.—Williams, Packhams Triumph, Josephine de Malines, Glou Morceau, Beurre Bosc, light to medium.

Beurre de Capiaumont and **Winter Nelis,** good.

Winter Cole, very patchy; in some localities there is a good crop, whilst in other localities the crop is extremely light.

Varieties of Pears not included in the above list are, generally speaking, only carrying light to medium crops. The yield of Pears will be approximately 650,000 bushel cases.

Peaches.—Early varieties in the coastal districts are light, whilst later maturing varieties range from medium to good.

In the tableland districts the crop is very patchy. In some parts there is practically a total loss of the crop due to frost, whilst in other localities the crop is good. In the Murrumbidgee Irrigation Area, where the bulk of the Peaches are produced for drying and canning purposes, the crop is good.

Apricots.—In the tableland districts the crop of Apricots is much below the average. Heavy frosts during the blossoming and setting periods prejudicially affected the crop.

Cherries.—The crop of Cherries—the bulk of which has been marketed—was much below the average. In many districts some growers experienced a total loss of the crop due to adverse climatic conditions during critical stages of fruit development, viz., blossoming and setting periods.

Prunes.—The crop is patchy. In some localities there is a good crop, whilst in other localities the crop is extremely light.

Plums.—Early Japanese varieties in coastal districts are light. Later maturing varieties are more promising and should yield good crops.

In the tableland districts, generally speaking, good crops are expected.

Citrus trees in the chief Citrus growing areas are looking well, and there is every indication of a good setting, thanks largely to the beneficial rains which have been experienced.

General.—In some of the chief Apple and Pear growing districts climatic conditions during the past few weeks have been rather conducive to the development of black spot, and this fungus is in evidence in orchards in some localities where growers failed to take the necessary precautionary measures. Growers who sprayed their trees with lime sulphur or Bordeaux mixture have kept the fungus in check.

Brown rot is causing some losses to growers of early stone fruit in the coastal districts. So far codlin moth infestation is very light, but it is too early yet to form any idea what toll the pest will take of the Apple and Pear crop. The month in which infestation and damage, wrought by codlin moth, is most distinctly in evidence, is the first month of the year—January. Not until then is it possible to form any accurate idea of the extent and seriousness or otherwise of codlin moth infestation.

It is expected that a few small consignments of Apples will be sent overseas, but the quantity of Pears likely to be shipped will be negligible.

CO-OPERATIVE CONTROL OF MARKETING.

Do as Batlow Does.

Batlow fruitgrowers commenced colishing cool stores with 8,000 case space capacity. In 1924 they increasoperative operations in 1923 by estabed their stores to 14,000 cases, and, in addition, formed a co-operative packing-house company, and provided and operated the most up-to-date and efficient packing conveniences and plant. In 1926 the success of the existing cool stores demanded increased accommodation, and the stores were again enlarged to provide 24,000 case space. Not satisfied with trebling their undertaking in the first four years of their operations, the Society is at present engaged in duplicating their stores, and will have from 45,000 to 50,000 case space available to handle the 1928 Apple and Pear harvest. As the stores are filled twice in the normal year, Batlow will be able to store upwards of 100,000 cases next harvest.

The cool stores and packing-houses have enabled the growers to exercise control over their marketing, and in this connection their Sydney selling depot and their direct country sales have been mutually beneficial to the producer and the consumer.

There are only 36 members of the cool stores and 24 of the packing-shed. The capital costs are:—Cool stores, £14,000; packing-shed, £3,500, making a total capital outlay of £17,500, of which £11,705 has now been actually provided by the growers. Of this £11,705 calls on shares have provided £5,785 and retention and loan levies £5,920. To provide for the 1927-28 extension of the cool stores, this latter sum is being capitalised in the form of shares paid up to 5/-, which are being issued to existing shareholders in proportion to their individual retention and loan levy credits. It is of interest to note that the loan levies which in the case of the packing-house amount to 3d. per packed bushel case on all fruit handled for shareholders, and with the cool stores to 6d. per case space per annum—both charges representing comparatively small deductions—have provided the means whereby the latest extension work is being financed.

The new work is estimated to cost £11,500, the whole of which amount will be advanced by the Rural Bank, the company having made arrangements by a system of case-levy to repay the whole within ten years. It is interesting to realise that the capital expenditure for the 36 people involved is £29,000, and that they are prepared, in view of their experience, to go on and on with the steps that will give them what all secondary producers require to get—the control of their produce.

General Australasian Representative:

H. G. COLOMBIE

Temple Court, Collins Street, Melbourne

'Phone: F3284.

Telegraphic Address: "Columbine," Melbourne.

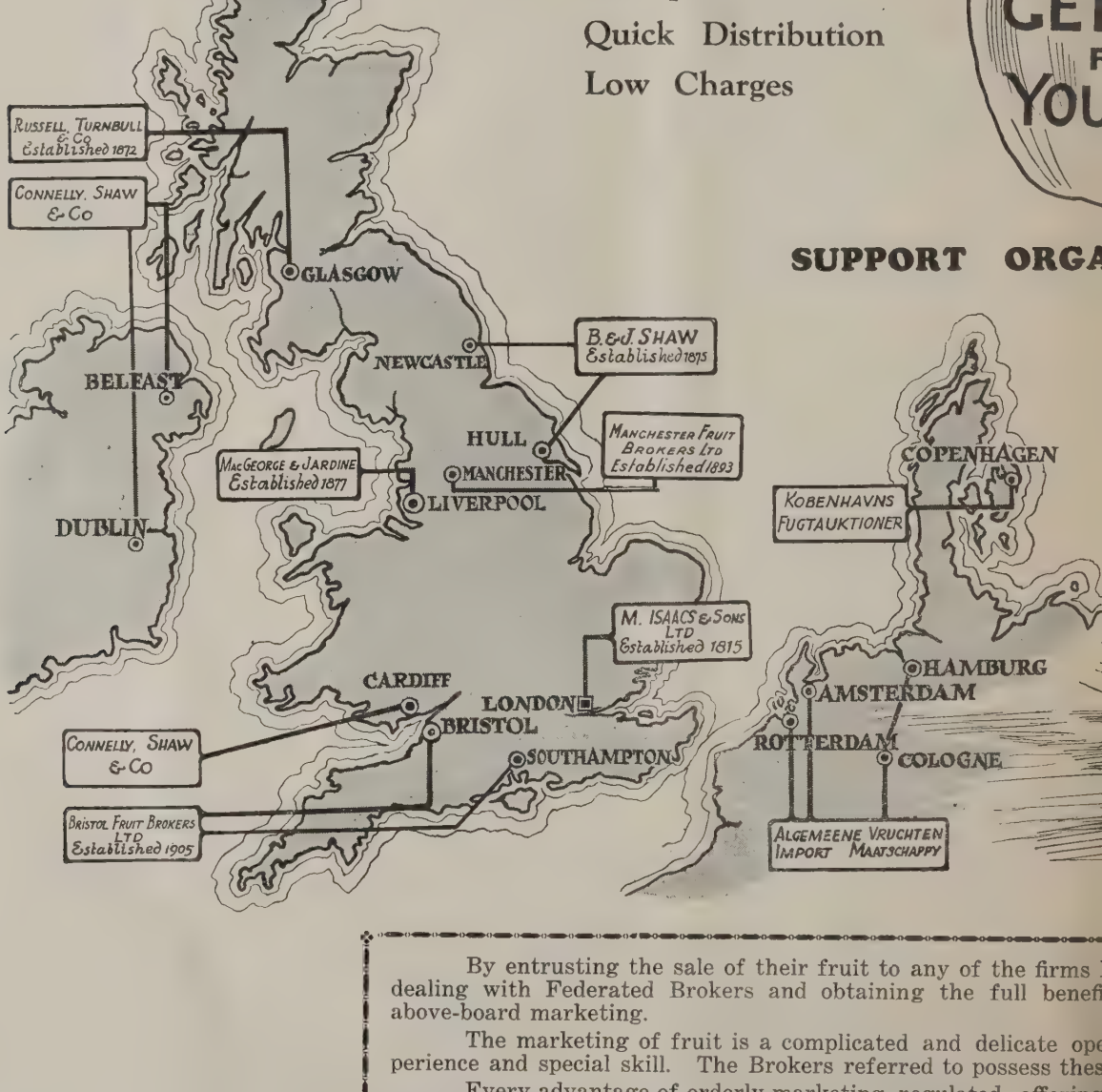
Over twenty years' experience in the marketing of fruit in the United Kingdom and on the Continent.

INCREASE Y

BY

COMPLETE AND

Prompt Returns
Quick Distribution
Low Charges



GET
F
YOU

SUPPORT ORGA

By entrusting the sale of their fruit to any of the firms
dealing with Federated Brokers and obtaining the full benef
above-board marketing.

The marketing of fruit is a complicated and delicate op
perience and special skill. The Brokers referred to possess thes

Every advantage of orderly marketing, regulated offering
knowledge of what happens to your fruit, is assured to you by t
tion not built up on paper, but created by generations of solid

UR RETURNS

THIS

ECT ORGANISATION

For shipping space, advances, etc., apply to the Shipping Representatives shown on this map.

AUSTRALIAN GROWERS!

Profit by the experience of others, and **SUPPORT ORGANISED MARKETING.**

CENTRALISE the sale of your fruit **IN** the **ONE RECOGNISED AUCTION SALEROOM AT EACH PORT,** where Overseas Fruit is concentrated, and where large numbers of buyers attend regularly, ensuring **WIDE DISTRIBUTION.**

This **CONCENTRATION ENABLES BROKERS** to **REGULATE SUPPLIES** and **STABILISE PRICES.**

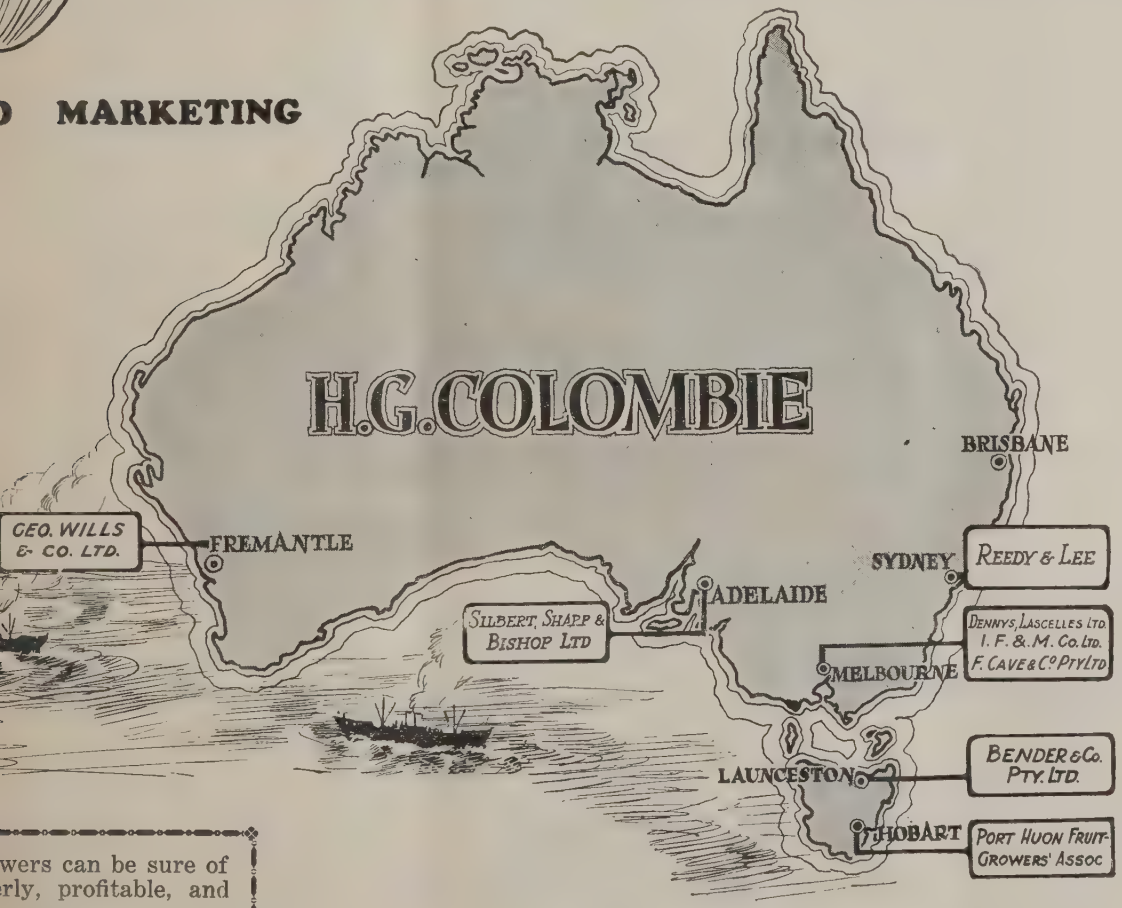
By this system **BUYERS** are **MADE** to **COMPETE** for the fruit to the **BENEFIT** of **YOUR RESULTS;** whilst by other methods Salesmen compete to obtain buyers.

CATALOGUES are printed for Buyers before sale, and reprinted after sale, **SHOWING ACTUAL PRICES PAID for your fruit.** No manipulation of results possible.

Parcels are sub-divided to enable all buyers to compete on equal footing.

Each parcel is valued by Auctioneer before sale, and lots not realising reserve prices are withdrawn.

D MARKETING



wers can be sure of
erly, profitable, and

alling for great ex-

markets, and full
sation; an organisa-
practical experience.

Dennis & Cooper LTD

COVENT GARDEN
LONDON, England

Fruit Brokers and Commission Salesmen

APPLE and PEAR Specialists

Financial Facilites Offered.

MAKE YOUR SHIPMENTS THROUGH

Messrs. S. J. PERRY & CO.

364 Little Collins Street,
MELBOURNE
who will give all information.
Phone Cent. **3480.**

Victoria.

Fruit Crop Reports and Prospects : District Notes.

VICTORIAN FRUIT CROPS.

Seasonable Report to End of November, 1927.

The Superintendent of Horticulture reports:—

Fruit, Except Vines and Citrus.

The reports of District Orchard Supervisors indicate that the fruit crop in all districts will be good and up to the present the principal fruit tree diseases have been effectively controlled.

Caterpillars (Cut Worms) have done some damage to stone fruits throughout the State, but this will not appreciably affect the yield except in a few isolated cases.

At the present time the promised yield of the different kinds of fruit are as follow:—

Apples.—Good to heavy.

Apricots.—Fair to medium, approx. a 60 per cent. crop.

Almonds.—Light.

Peaches and Nectarines.—Good to heavy.

Pears.—Light to medium. Set heavy, but thinned considerably.

Plums and Prunes.—Medium.

Cherries.—Fair to medium.

Quinces.—Good.

Walnuts.—Good.

Figs.—Light to medium.

Berry Fruits.—Heavy.

Passion Fruit.—Fair to medium.

In the Goulburn Valley there is a good crop of Canning Peaches. Pears have dropped badly in some orchards, and only a light crop has set. Apricots are fair—the Moorpark being the lightest.

Viticulture.

The vines that escaped the September frosts look very well throughout the State. The October showers (3.39 ins. at Rutherglen), having benefited them without being heavy enough to cause fungous trouble. The blossom has taken place under generally favorable conditions, notwithstanding a general heat wave from 8th to 11th November. At Mildura 105 deg. was registered on the 10th November, and 103 deg. in Melbourne on the same day. Cool weather followed. There was, in consequence, some dropping of Sultanas, but in the majority of cases it was only slight.

Black Spot is showing slightly in many places. Though not sufficient to do harm, owing to dry weather supervening, it will have to be reckoned with next winter, at the season for swabbing, when susceptible vine sorts will need treatment.

The injury resulting from the frosts is variable, and its effect on the coming dried grape vintage difficult to assess at this stage. The loss seems to be between 30 and 40 per cent. Recovery is often erratic, and varies much. On the worst affected vines it is slow and unsatisfactory, leaving doubts as to the value of next season's pruning wood.

Wine Grapes have suffered much loss—last month's estimate of loss at Rutherglen (25 per cent.), may perhaps be excessive.

Citrus.

Information from all districts report a heavy setting of Oranges, Mandarins, and Grape Fruit. Lemons also have set a heavy main crop. In some districts the heat of the 9th, 10th, and 11th November caused a severe drop of navel fruits. The setting of fruit was, however, so heavy that a drop of certain fruit was to be expected.

Valencia Late Oranges are now being marketed, and good prices are ruling for same, also Lemons.

VINTAGE PROSPECTS FOR 1928.

Viticultural Society's Annual Report.

The uniformly high standard maintained by Victorian sweet export wines is emphasised in the annual report of the Viticultural Society of Victoria. The method of supervision established by the Customs Department, the report states, obviates any danger of the exportation of wine that is not a credit to the State and to Australia.

The vintage for 1927 was carried out, in most places, under very favorable conditions, and the yield was, in some districts, greater than was expected. In Rutherglen ideal conditions prevailed. In the Great Western district, however, frosts marred the prospects of a good vintage, and the yield to the acre of dry wines was most disappointing. Regret is expressed that, in some instances, the growers became disheartened and permitted their vines to go out of cultivation. This is all the more deplored owing to the gradually decreasing supply of good light table wines in the State. The quality of the 1927 vintage is regarded as equal to that of 1922, which was the best in the Rutherglen district since phylloxera played havoc in that area.

Although it is still too early for an accurate forecast, it is thought that the prospects for 1928 favor a normal vintage. The alarming reports of loss through late frosts which visited practically all the wine districts of Australia at first threatened a shortage of 50 per cent. Later reports, however, are not so alarming. The worst damage has been done in the irrigation areas among the drying varieties of Grapes such as Sultanas and Currants. Subsequent climatic conditions favored a good recovery of the damaged vines, and growers are looking forward to a vintage in excess of first estimates. There is practically no sign of downy mildew, and, although spraying has not been neglected, the menace has been very slight. Great Western has again suffered severely from frost, but here again the result will show an improvement on the original estimates.

SHEPPARTON NOTES.

The fruit season gives promise of being one of the best on record from a production point of view. Apricots will produce rather less than last year, but Peach and Pear trees are heavily laden. Thinning has been freely resorted to, but growers are being advised to carry the process further in order to ensure standard size being reached.

As £12 a ton has been guaranteed by the canneries, orchardists are in good heart, and view the prospects with feelings of gratification. To ensure full time at the cannery and the keeping of overhead costs at a minimum, the cannery directors have decided that individual contracts must be signed by growers, and these contain stringent conditions in regard to fulfilment.

Last season the cannery processed 900,000 tins more of Apricots than in the preceding year, and have sold the lot, whereas there were 3,000,000 fewer tins of Peaches put up than in the former season, and there is a carry-over. The cannery insists on growers supplying to the factory 90 per cent. of the Apricot crop and 80 per cent. of the Peach and Pear yields. The Cannery will pay £12 a ton all round for Apricots, Pears, and Peaches. It will also treat suitable varieties of Plums and Quinces.

Good progress is being made on the newest of the Water Commission estates to the north of Shepparton. Practically all the blocks in the Katandra subdivision under the migration scheme, which have been made available, have been allotted.

Experience is proving that the Katandra lands are well adapted for irrigation. Due to weather conditions, combined with the increased mileage of irrigation channels, brought into use for the first time, the demand for

water has been a record. The storages are now being drawn upon, and blockholders have been cautioned to guard against waste. The charge for irrigation water on the Shepparton settlement this year is 6/- an acre-foot, but it has been hinted that this will be increased in the near future.

As a result of a revaluation of properties, the charge for water from the channels for stock and domestic purposes has been increased. The actual work on channel excavation is almost restricted for the time being to the continuation of the main outfall drainage channel at Katandra.

SHEPPARTON ORCHARD PRODUCTS.

Company to be Wound Up.

At a meeting on November 21 of shareholders in the Shepparton Orchard Products Co. Ltd., which controls the packing-sheds, the committee of investigation presented a report in which it was mentioned that when the committee was appointed the shortage was stated to be £1,396, but it was disclosed that the liabilities totalled £3,648 at least. That unsatisfactory state of affairs greatly hampered the committee, as it made the position obscure. The directors had thought that £2,000 might be raised, but it had been found impossible to get this additional money. The directors had explored without success every avenue which might lead to a continuance of the company. The committee recommended that the company be wound up.

Councillor W. G. Parker, chairman of directors, said that the directors concurred in the committee's report. It was resolved that the company be wound up. Mr. A. T. B. Goven was appointed liquidator.

HARCOURT FRUITGROWERS.

In spite of an adverse season the balance-sheet of the Harcourt Fruitgrowers' Progress Association submitted at the annual meeting showed a turnover of £6,200 in the trading account, while the net profit was £234. The chairman (Mr. E. Pritchard) said that the directors were recommending the appointment of a local manager at a salary of £500 per annum, with the reappointment of Mr. Butler as secretary, at a salary of £260 per annum.

The directors have already signed contracts for the sale of 38,000 cases of Apples at a satisfactory price. Arrangements have also been made for the supply of 70,000 seasoned hardwood cases in shooks, 10,000 softwood cases, and 40,000 green hardwood cases. Negotiations for the purchase of the Plum, Pear, and Apricot crops were well in hand, and contracts for these fruits would be signed in due course. Numerous nominations were submitted for the members of the incoming board, and Messrs. E. Pritchard, J. H. Ely, F. M. Gaasch, H. M. McLean, C. A. Bertuch, G. Douglas, and W. J. Wirth were elected.

EXPERIMENTAL ORCHARD.

We understand there is every prospect of the farm attached to the Shepparton High School being transferred to the Agricultural Department for use as an experimental orchard. The farm comprises about 50 acres, 20 of which are already planted with fruit trees. While this is not the position or area considered ideal by Goulburn Valley growers for an experimental orchard, it is, perhaps well to be thankful for small mercies, and look forward to much good work being done.

CANADIAN APPLES.

According to official reports the commercial crop of Apples in Canada this year will total nearly 3,000,000 barrels, or 14,800 barrels more than last year.

The Dominion's annual exports during the past three years averaged approximately 1,500,000 barrels, the principal markets being the United Kingdom and U.S.A.

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England and the Continent.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

FRUIT CROPS IN VICTORIA.

Record Apple Exports Expected.

The Superintendent of Horticulture (Mr. J. M. Ward) supplies the following information regarding the fruit crops and prospects in Victoria for the 1928 season.

Apples.—The estimated total production is 2¼ million cases. The quantity available for export overseas will probably be between 700,000 and 800,000 cases, which would constitute a record for Victoria.

So far, the quality promises to be very good indeed, and the market prospects also seem good. This year there seems to be a larger number of f.o.b. buyers than ever before, and probably 90 per cent. of the Apples exported from Victoria will be sold f.o.b. at between 7/- and 8/- per case. This should prove satisfactory to the growers.

Grading and Packing Regulations.—A meeting of the Government fruit supervising officers of the various States, and other officials, was held about a month ago to discuss some slight alterations in the grading and packing regulations, which were adopted, and will be in force for the first time this season. Practically speaking, these amount simply to a tightening up of the inspection, which will be more strict than ever before. This will ensure that only fruit of good quality leaves the Commonwealth for overseas markets.

Seasonal Conditions.—The season is in most respects a normal one, with no special conditions of weather or pests to reduce the quality of the fruit. In practically all cases the trees are healthy and promise well. There is very little black spot about. The codlin moth may be troublesome, but growers are now thoroughly alive to the seriousness of this pest, and adopt scientific measures for its control.

Sheep's Sheep.

"Now, Harold," said the teacher, after explaining the principle of subtraction, "if there were eleven sheep in a field, and six jumped over the fence, how many would there be left?"

"None," replied Harold.

"Why, but there would," she said.

"No, Ma'am, there wouldn't," he persisted. "You may know arithmetic, but you don't know sheep."

Struggle keeps you young. Note how a prune's wrinkles disappear when it gets in hot water.—"S.F. Chronicle."

AMERICAN FRUIT CROPS.

STATISTICAL INFORMATION issued by the Californian Department of Agriculture, give the following particulars in regard to the fruit crops on November 1. The figures quoted refer to fruits which compete with Australian exports in overseas markets.

California.

Apples.—The total production of Apples in California this year amounted to 7,354,000 boxes. This is a short crop in comparison with 10,350,000 boxes produced a year ago and the five-year average production of 8,700,000 boxes. All of the important varieties produced lighter yields than in 1926.

In the table below is given the preliminary estimate of the commercial crop (that part which is consumed fresh) for this season, in comparison with 1925 and 1926 for the important western States:—

	1925 Production, Boxes.	1926 Production, Boxes.	Preliminary Est.—1927, Boxes.
California	3,291,000	6,144,000	4,413,000
Idaho	5,250,000	2,775,000	4,272,000
Oregon	3,888,000	5,100,000	2,808,000
Washington	26,010,000	25,650,000	20,445,000

Pears. — Preliminary information indicates that the Pear crop will amount to about 176,000 tons. The estimated tonnage harvested in 1926 was 207,000 tons, while the production in 1925 was 181,000 tons and 133,000 tons in 1924.

Oranges and Lemons.—The condition of both Navel and Valencia Oranges is 69 per cent. of a normal. Last year the condition of Navels at this time was 80, and that of Valencias 86. The heavy rainfall in Southern California the last day of October, will more than likely be of benefit to the Orange crop.

The condition of the Lemon crop is estimated to be 67 per cent. of a normal. Last year the November 1 condition was 92.

Raisin Grapes.—The preliminary estimate of the production of **Raisin Grapes** places the crop at about 1,434,000 tons on a fresh basis. Information now available indicates that about 1,140,000 tons were dried which would be equivalent to about 285,000 tons of **Raisins.** Last year the production of **Raisins** from strictly Raisin Grapes was about 272,000 tons. Raisin Grapes consumed in a fresh state in 1926 were estimated to be 229,000 tons. The quality of the 1927 crop is good.

United States.

In the table that follows are given figures of the entire United States of the production forecast for 1926 and 1927, at corresponding periods:—

	Total Production.	
	December Estimate, 1926.	November Estimate, 1927.
Apples (Total), bushels	246,460,000	119,333,000
Apples (Commercial), barrels	39,095,000	24,060,000
Peaches, bushels	68,425,000	45,963,000
Pears, bushels	25,644,000	17,943,000
Grapes, tons	2,349,000	2,577,000

GOOD FOR ROOT BORERS.

For insects that live below the ground, paradichlorobenzene has successfully been used in California. It is best used when the temperature of the soil is around 75 deg. It is sprinkled in a ring a couple of inches or more wide around the tree, being careful not to get the substance closer than 2 in. from the bark for peach tree borer, and from 4 to 6 in. away for pear root aphis or woolly apple aphis. Cover these rings of the substance with dirt. In treating large trees it may be advisable to spread a little of the fumigant radiating outward from the tree. For an average size 10-year-old tree, 2 oz. is enough for a treatment. Smaller trees require less. The substance should be removed after about three weeks.

THE COST OF INSECT PESTS.

The fumigation of 81,500 acres of Citrus trees for various insect pests cost the Citrus growers of California £460,000 last year, according to R. S. Woglum, field entomologist, California Fruit Growers' Exchange. The maximum amount expended for this purpose occurred, however, during the season 1923-24, when over 90,000 acres were so treated at a cost of £540,000. Aside from fumigation, Mr. Woglum states that 54,000 acres of Citrus were sprayed as pest control measures at a cost of £270,000, making the total cost of insect pest control on Citrus in California for 1926 amount to £730,000.

FRUIT FOR GREAT BRITAIN

The Port of Hull

Possesses the **SECOND LARGEST FRUIT MARKET** in the United Kingdom. Is the **ECONOMIC PORT OF ENTRY** to Great Britain serving over 12,000,000 **people.** **BUYERS** attend from all parts of ENGLAND, SCOTLAND and the CONTINENT. Possesses the most modern and Efficient Facilities both for the

Handling and Distribution

of all forms of CARGO. Provides the Best **STEAMSHIP SERVICES** to all parts of the **CONTINENT.**

Australian Growers and Exporters

You can secure

THE BEST PRICES. THE BEST FACILITIES

THE CHEAPEST CHARGES

if you consign your

FRUIT TO HULL

Served by the LONDON & NORTH EASTERN RAILWAY

Agents throughout Australia : **Messrs Burns Philp & Co. Ltd.,** Sydney and Branch Offices

New Zealand, **Messrs J. A. Redpath & Co. Ltd.** Christchurch and Branch Offices

THE FRUIT WORLD OF AUSTRALASIA.

SPECIAL EXPORT SECTION

The Production of Apples in Australia and New Zealand

This year is expected to reach
. . . Nine Million Bushels . . .

The Fullest Utilisation of Overseas Markets is Essential

Marketing Fruit in Great Britain.

Australian and New Zealand Produce is Appreciated.

Big Trade Expansion is Possible by Meeting the Needs of Buyers.

Developing British Ports.

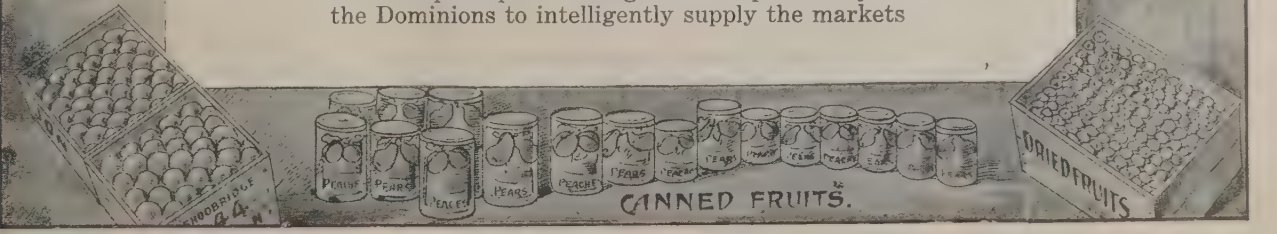
(By R. E. Boardman.)

London, 1/11/27.

THE BRITISH Market is of vital importance to producers in Australia and New Zealand, and at the same time Continental markets are increasing in importance.

It is delightful to place on record that the Empire spirit is very real. Not only are the traders doing their utmost to stimulate trade within the Empire, but there is corresponding sympathy on the part of the general public, with the result, among other things, that Australian fruit—fresh, canned, and dried—is being definitely asked for by the British public.

The services rendered by Australia, New Zealand, and the other Dominions during the war are remembered with undying gratitude. The fact that Britain is earnestly and successfully seeking to develop Empire trade gives a responsibility to the Dominions to intelligently supply the markets



Spitalfields Market,
LONDON

(Owned and controlled by the Corporation of the City of London)

Supplies a Population of 9,000,000

Nearest Market to

THE PORT OF LONDON
DOCKS AND WHARVES

with Railway connections to all parts of

THE UNITED KINGDOM

— Extensions now in hand will make this the —

LARGEST FRUIT & VEGETABLE MARKET IN GREAT BRITAIN

BRITISH AND COLONIAL GROWERS
CONSIGN TO

SPITALFIELDS MARKET

General Information can be obtained from:—
SUPERINTENDENT, SPITALFIELDS MARKET, LONDON, E.1.

here with the goods which the people need, and for those goods to be presented to the public in the manner best calculated to win their ready acceptance.

The Scientific and Industrial Research Council, and now more specifically the Empire Marketing Board are doing remarkably fine service in the cause of Empire Development. It depends largely on the response of the fruit industries of Australia and New Zealand as to the extent of their share in the advantages which are provided.

The attitude of the fresh fruit trade of Great Britain is one of helpfulness. Suggestions, based on experience, for the benefit of the producers in the Dominions have been made in the hope that the growers will get the best returns from their orchards. These have been published from time to time in the "Fruit World." The trade believes that standardised grades in long lines of district packs would yield better returns than small lots of varying grades and varieties from individual growers.

Loading Apples at a Tasmanian Port for Shipment Overseas.

Port and dock facilities are being provided with gratifying thoroughness and attention to detail. In this respect the port authorities of London, Liverpool, Hull, Manchester, Glasgow, Southampton and Cardiff are deserving of commendation. More detailed information will be supplied later regarding specific activities in this connection.

Successful Advertising.

Advertising campaigns have substantially increased the consumption of fruit. It is to be hoped that this important enterprise of advertising will be continuously conducted. It is impossible to over-rate its importance.

With a general increase in fruit consumption, coupled with increased facilities for reaching the large centres of population and provincial areas, there are possibilities for extension which are not as yet fully realised by producers and importers from the Dominions.

Coming Season's Prospects.

The prospects are decidedly favorable for a profitable export season in 1928 from Australia and New Zealand. The American commercial Apple crop has been reduced from 116,000,000 bushels last year to 72,000,000 in the present season. English and Continental fruit crops are being absorbed, so that by the time fruit from Australia and New Zealand comes forward, there should be a reasonably clear market, with no undue competition from American cold-stored varieties. The improved economic conditions in Europe will have an important and favorable bearing on the prospects for satisfactory prices for Australian and N.Z. Apples, Pears, and Grapes.

Marketing in London.

Possessing a population greater than that of the whole of Australia, a few words on London's marketing facilities will not be out of place.

Covent Garden has been often criticised, and as often defended, but of the vast quantities of fruit auctioned at the Monument, less has been heard than is warranted by the importance.

The sum of £2,000,000 is now being spent in enlarging the Spitalfields Market. This work is actively in progress; within the course of a year or so there will be a valuable addition to London's marketing progress. In particular, a model sale room is being erected for fruit auctions; this sale room is on generous lines, and is designed to be an improvement on the auction sale rooms of Liverpool and Hamburg.

Covent Garden is not being forgotten in these marketing extensions. The idea, which was recently expressed for the removal of Covent Garden, has been definitely abandoned, and instead a new proposal is favored, viz.—that of pulling down the the famous Covent Garden Theatre, and using the space for market purposes. This will not take place at once, owing to various contracts, but it will probably be done in two or three years' time.

Dominions Can Help.

Australian and New Zealand fruit is appreciated in Great Britain. The fact that the grading and packing has shown steady improvement is

GROWERS

Shipping Fruit on Consignment

TO

LONDON LIVERPOOL

HULL HAMBURG

Be Well Advised and consult

J. B. MILLS & Co.

BANK HOUSE BANK PLACE

MELBOURNE

Only the best Distributors used to handle your Fruit.

We know the business and our Chief Aim is Satisfaction.

Early application for shipping space is essential

noted with satisfaction. There is still room for further improvement, however, and the hope is expressed that those growers who have not yet perfected the art of grading will speedily do so, as the buyers desire uniform packs of graded fruit, whereas irregular grading causes disappointment and loss.

The United States, Canada, and—more recently—New Zealand, have set a high standard of marketing efficiency: small lines of differing varieties and sizes from individual growers have been eliminated; thus buyers are now able to secure long lines of standard varieties. The result has been that buyers can operate with confidence, and this is reflected in the prices.

Developing British Ports.

While always recognising the importance of London as a consuming and distributing centre for fruit and produce, it is noticeable that in recent years more attention has been paid by Dominion producers to other ports, notably Liverpool, Hull, Manchester, and Glasgow. Other ports which are pressing for attention are Southampton, Newcastle-on-Tyne, and Cardiff.

This policy of reasonable decentralisation has proved beneficial. Large centres of population have been conveniently reached, and the good prices which have been realised have reflected the satisfaction of buyers in the saving of inland freights, fewer handlings and quicker delivery.

There is keen competition between the several ports in the providing of up-to-date facilities for unloading and despatching produce from the Dominions.

The season for the arrival of Australian and New Zealand Apples on the British markets fits in nicely between the close of the American Apple export season and the commencement of the local soft-fruit season. The opportunity is therefore present for the Southern Dominions to supply the demand of the British buyers to the mutual satisfaction of all concerned.

The fruit from the Southern lands is appreciated, and the opportunity is present for a large

CORRECT APPLE PACKING IS ENCOURAGED IN AUSTRALIA.

Shield presented by the Victorian Fruit Exporters' Handling Committee to the State School winning the fruit packing competition at the Melbourne Royal Show. Won in 1927 by Somerville.

Fruit-packing classes for school children are now conducted in most of the States.

SALES DEPOTS.

No. 542-543 Covent Garden Market.
No. 97, 98, 101 Long Acre.
No. 1 Endell Street.

Cables—Spinach, London.
Codes—A.B.C., 5th Edition; Bentley's.

OFFICES.
97, 98 101 Long Acre.

FRUITGROWERS!

Consign your Fruit to

PASK, CORNISH & SMART

——COVENT GARDEN——
LONDON W.C.2, England

THE PROGRESSIVE FIRM of FRUIT SALESMEN

Who receive consignments of **Apples, Pears, Oranges,** and **Grapes** all the year round, thus assuring a clientele of best buyers. Spacious Sale Rooms suitably situated to display fruit to very best advantage.

Reasonable advances made against Bills of Lading. Balances paid by cheques drawn on Australasian Banks.

Sales entirely by Private Treaty

Last year handled more than ONE MILLION Packages of English, Colonial and Foreign Fruits.

REPRESENTED AT

TASMANIA
WESTERN AUSTRALIA
SOUTH AFRICA
NEW YORK
TENERIFFE
LAS PALMAS
AZORES

And all Principal Fruit Growing Centres in England, France, Spain, Belgium and Holland.

Tasmanian Representatives— **E. R. COTTIER & CO., A.M.P. Buildings, 88 Collins St., Hobart.**

Western Australia Representatives—
THOMAS HAYWOOD & SONS LIMITED, Bunbury, W.A.

REPRESENTATIVES REQUIRED in South Australia, Victoria and New Zealand.

expansion of the business. British buyers have indicated the lines on which improvements are desired. By fulfilling these desires and exploring every avenue for trade expansion, fruit-growers in Australia and New Zealand will find an increasingly large and profitable outlet for their choice fresh fruits, thus adding to the prosperity of the producers and assisting in the development of the Empire.

AUSTRALASIAN FRUIT PRODUCTION.

Probable Yields Summarised.

Export of 2,700,000 Bushels Expected.

Australia.

Apples.—The principal Apple-exporting States of Australia are Tasmania, Victoria, South Australia, and Western Australia. New South Wales produces large quantities of high-grade Apples, but comparatively few are exported to overseas markets.

Following the light yields in the Eastern States last season, the trees are in good heart, and excellent crops have set in most areas, the quality as a whole being good. In Western Australia, on the other hand, which produced a record crop last year, the setting has been somewhat reduced by thrips and weather conditions. Hereunder are official estimates (in bushel cases) at the middle of December, of the probable production and the quantities available for export:—

	Total Production.	Export Quantity.
Tasmania.—Very heavy crops, fair to good quality	3,750,000	1,600,000
Victoria.—Record crops of excellent fruit	2,250,000	750,000
South Australia.—Crops will probably equal the record production of	1,143,000	—
Export quota not given—possibly in the region of	—	250,000
Western Australia.—Crops light, probably between 250,000 and	300,000	—
Export, possibly	—	100,000
New South Wales.—Crops good to excellent; export very small	1,200,000	—
	8,643,000	2,700,000

This makes a total production for Australia of roughly 8½ million bushels of Apples, with a probable export of about 2¾ million bushels. The average annual production of Apples in Australia is 6½ million bushels. The record export season was in 1926, when 3,150,000 bushels were exported from Australia, and 730,000 from New Zealand.

Pears.—Pears are patchy in most of the States, and promise light, average, or medium crops. New South Wales expects a yield of 650,000 bushels; Tasmania, 180,000; Western Australia, 90,000; Victoria and South Australia report light to fairly good crops. It is difficult to obtain an estimate of the quantities that will be shipped overseas, as the export is mainly in the hands of private growers.

New Zealand.

Apples.—Heavy crops are anticipated, and preliminary arrangements are being made for an export of 900,000 cases.

Pears are patchy, but the indications seem to point to a fair average crop.

FINE WORK AT THE LIVERPOOL DOCKS.

Large Cargo Expeditiously Handled.

Many examples can be given of the expeditious manner in which shipping and commerce are handled at the Port of Liverpool.

One of the latest is that of the s.s. "Trewellard," which arrived in Liverpool from Port Louis, Mauritius, on November 7, with a large cargo of sugar. The vessel commenced discharging at the East Sandon Dock on the morning of the 8th, and her entire cargo of over 87,000 bags of sugar was not only landed but delivered at the warehouses of Messrs. Tate & Lyle by the 14th—an average of 14,500 bags per day.

This speaks volumes for the stevedoring services and facilities offering at the port.

THE DISTRIBUTION OF AUSTRALIA'S FRUIT.

THE following figures, extracted from Customs and Board of Trade reports, give an indication of the distribution of Australia's fruit (fresh, dried and preserved) through the various ports of entry in Great Britain.

(Continued on page 41.)

APPLES

For Best Results
. . Consign to . .

Hartstoke Fruiterers Ltd.

Brentford Market
London, W. 4.

SALES CONDUCTED BY PRIVATE TREATY ONLY

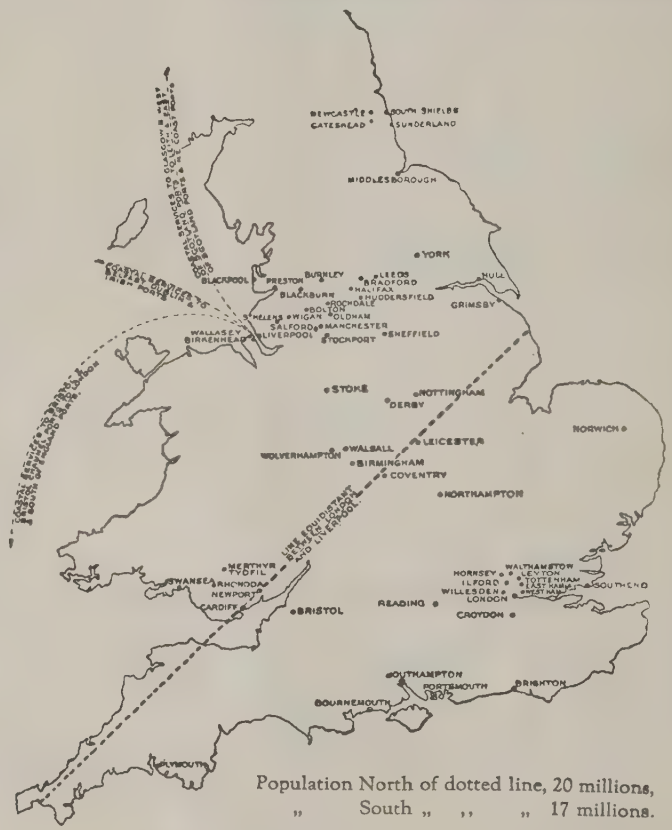
Advances to Cover Freight.
Shipping No. 721.
Code: A.B.C. 5th Edition.
Cables: Hartstoke Brentford Market London.

By consignments direct to Brentford Market you are assured of a ready and profitable outlet for your produce, and save the distributing expenses of a central market. Brentford Market serves a large and growing area with an estimated population of 4 millions.

SHIP YOUR FRUIT

TO

LIVERPOOL



Population North of dotted line, 20 millions,
„ South „ „ „ 17 millions.

LIVERPOOL, the greatest market and distributing centre for the North and Midlands of Britain.

AUCTIONS are held throughout the year on Mondays, Wednesdays and Fridays

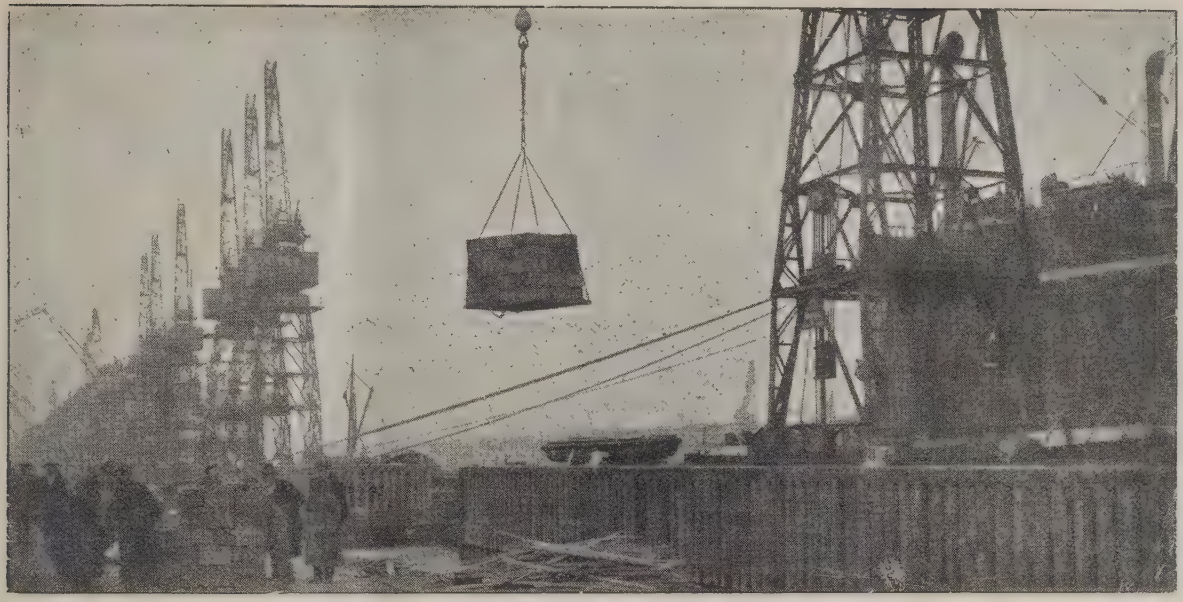
Buyers attend these sales from all over the United Kingdom.

The Port contains every facility for COLD STORAGE, which amounts to **over 8,000,000 cubic feet.**

Rapid distribution for perishable produce is secured by means of the most modern rail and road transport.

Members of the Liverpool Fruit Brokers' Association;

JAMES ADAM, SON & CO.
L. CONNOLLY & CO.
GOODWIN, SIMONS LTD.
J. C. HOUGHTON & CO.
MACGEORGE & JARDINE
ROGERS, WHITE & CO.
WOODALL & CO.



UNLOADING AUSTRALIAN APPLES AT LONDON.

London is still the largest fruit market in the United Kingdom, and is served by the world-famous market at Covent Garden (plans for the improvement of which are being arranged), and up-to-date facilities at Spitalfields.

Newcastle on Tyne England

The centre of the Coal, Iron, Engineering Trades, Shipbuilding etc.

NEWCASTLE on TYNE. The market for the North East Coast with a population of approx. 2,000,000.

If you desire direct association with this area correspond with

W. Longfield & Son

Fruit Brokers. Newcastle on Tyne

ESTABLISHED 1868

Codes: A.B.C. 5th. Edition
Bentleys

Cable address:
"Longfield" Newcastle on Tyne

Bankers: Bank of Liverpool and
Martins, Gallowgate, Newcastle

RIDLEY & HOULDING

Covent Garden Market
London,——————England.

IMPORTERS OF Apples, Pears and Oranges from Australia and New Zealand

WE have been connected with the Australian and New Zealand Apple, Pear and Orange Trade for over twenty years.

. . Consignments receive personal . . attention, Our representatives will be pleased to arrange for the forwarding of consignments to our house

VICTORIA:
International
Fruit and Mercantile Co.
(A. S. HARRISON)
410 Flinders Lane, Melbourne.

Cable Address:
" BOTANIZING,"
RAND LONDON

TASMANIA:
Messrs. Murdoch Bros.
HOBART.
A. J. Walsh & Co.
HOBART.

Telegraphic Codes:
A B C, 4th. 5th. 6th. Edition
Bentley's Modern Economy
Western Union.

It will be noted that in every case London receives the lion's share; but much of this fruit is, after sale at the various big markets, railed to provincial centres or re-shipped to the Continent. Direct shipments are now being developed to the principal provincial ports of the United Kingdom, which serve large industrial areas of dense population, and where efficient and up-to-date marketing facilities are provided. London will always provide the biggest market, but direct shipments of the quantities needed for consumption in other areas will not only save freight and handling charges, but by avoiding the many additional handlings required in forwarding through London, enable the fruit to reach the consumer in much better condition, and therefore to command higher prices.

The figures quoted cover the quantities of Australian fruit received at the various ports for the period, July 1, 1926, to June 30, 1927.

Dried Fruits.

Cases.

	N.S.W.	Vic.	S.A.	W.A.
Bristol	—	12,684	6,982	—
Glasgow	—	26,350	5,700	—
Hull	—	9,754	8,842	—
Liverpool	—	144,679	29,869	—
London	147	518,308	169,492	22,709
Manchester	—	3,224	5,000	—
States' Totals	147	714,999	225,885	22,709

Grand Total .. .. 963,740 Cases Dried Fruit

Jams and Preserves.

J stands for Jams, P for Preserves.

	Vic.	S.A.	Tas.
Glasgow	2J	—	—
	4P	1,500P	
Hull	—	—	2,569J
London	271J	3J	27,363J
	91,798P	—	4,647P
Liverpool	—	—	7,327J
Bristol	—	2P	—
	273J	1,502P	37,259J
	91,802P	3J	4,647P

Grand Total, Cases .. .. .. 37,538 Jam, 97,951 Preserves

KING GEORGE DOCK, HULL.

The Hull Docks, owned by the London and North Eastern Rly. Co., cover a water area of 232 acres, and are equipped with the most up-to-date facilities for handling fruit and other produce.

Fresh Fruits.

A stands for Apples, O for Orange, U unspecified.

	N.S.W.	Vic.	S.A.	W.A.	Tas.
Hull	—	3,872A	—	19,996A	115,198A
					13,204U
Liverpool	13,115U	—	—	121A	—
London	471O	3,172A	739A	190,411A	595,900A
	5,212U	1,966U	644O	424O	41,453U
			395U	44,029U	
Manchester	—	—	—	625A	21,842A
Southampton	—	—	—	—	9,105A
					41U
State Totals	471O	7,044A	739A	211,153A	742,045A
	18,327U	1,946U	644O	424O	54,698U
			395U	44,321U	
		A	O	U	
Grand Totals		960,981	1,539	119,687 bushels	

AUSTRALIAN FRESH FRUIT WILL HELP TO ESTABLISH YOUR DRIED AND CANNED FRUIT EXPORTS.

CONCENTRATE on the markets giving the best prices. The North-East Coast of Great Britain has an enormous industrial population. Ship direct to save handling and keep expenses to a minimum.

The London and North-Eastern Railway is doing its utmost to assist Australia to establish the marketing of her primary produce.

You do your part by supplying the goods direct to Hull.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS,

Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Greenberg, S. & M., Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.

Andrew, Fred J., 416 Lit. Collins St.
Colombie, H. G., Temple Court.
Cave, F., & Co., Melbourne.
Davis, J., Western Market.
Dennys, Lascelles Ltd., Temple Court, Melbourne.
Lister, G., Western Market.
Millis, A., & Sons, Western Markets.
Mills, J. B., & Co., Bank House, Bank Place, Melbourne.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, 325 Collins St., Melb.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Piesse & Co., C.

Launceston.

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.

Dennis & Cooper Ltd., Covent Garden.
M. Isaacs & Sons Ltd.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salters Hall Court.

Liverpool.

MacGeorge & Jardine.
Jas. Adam Son & Co., Fruit Exchange.

Hull.

Shaw, B. & J. also Newcastle).
White & Son Ltd.

Bristol & Southampton.

Bristol Fruit Brokers Ltd.

Cardiff, Belfast & Dublin.

Connelly, Shaw & Co.

Glasgow.

Russell, Turnbull & Co.

Manchester.

Manchester Fruit Brokers Ltd.
The Port of Manchester, rep., W. J. Wade, 8 Bridge Street, Sydney.

GERMANY.

Bremen.

Fruchthandel, Gesellschaft.

Hamburg.

Astheimer, P. H., & Son, Fruchthof.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.
Algemeene Vruchten Import Maatschappy (also Cologne).

HOLLAND.

Amsterdam & Rotterdam.

Algemeene Vruchten Import Maatschappy.

DENMARK.

Copenhagen.

Kobenhaons Fugtauktioner.

AUSTRALASIAN MARKETS.

Victoria.

Melbourne, 30/12/27.

Heavy supplies of Tomatoes were received yesterday, and merchants were unable to clear stocks of the poorer grades except at very low prices. Quotations at the Western Market were as follow:—Per Case: Apples, choice, dessert, 16/- to 18/-; do., cooking, 5/- to 7/-. Apricots, special, 8/ - to 10/-; medium, 6/-; others, 3/6 to 4/6. Bananas, special, 26/-; choice, 16/- to 18/-; standard, 11/- to 14/- per double case. Cherries, choice, dark, 14/- to 15/- half-case. Lemons, 16/- to 22/- per case. Oranges, Victorian and N.S.W., 18/- to 22/-; N.S.W., second crop, 7/- to 9/-. Valencias, 12/- to 16/-. Passion Fruit, 8/- to 11/- half-case. Plums, dark, 7/- to 8/-; light, 6/- to 7/-. Pineapples, Queen, 14/- to 18/- double case. Peaches, A, 7/- to 8/-; B, 6/-; C, 4/-. Tomatoes, Victorian, special, 8/- to 9/-; others, from 2/6 to 7/-. Cucumbers, N.S.W., 6/- to 8/-.

New South Wales.

Sydney, 22/12/27.

The Sydney fruit market this week has been oversupplied with all summer fruits, second-crop Oranges, and a large number of main-crop Valencias. As most of the suburban gardens have a few trees bearing at this time of the year, the market has been very dull. The Producers' Distributing Society supplied the following quotations:—Apples, local Carringtons, 2/- to 14/-; cooking, 7/- to 12/-; jam apples, 2/- case. Plums 1/- to 1/6 case for jam. Lemons, 8/- to 14/-. Oranges, common, 6/- to 12/-. Valencias, 10/- to 20/-. Passionfruit, 6/- to 15/-. Peaches, 2/- to 6/-. Apricots, 3/- to 8/-. Nectarines, 4/- to 10/-. Plums, extra choice, 10/- a box.

Western Australia.

Perth, 24/12/27.

Apples: Granny Smiths, prime dumps, 16/- to 20/- (special to 24/6, and others from 8/-); Yates, 13/- to 18/- (special to 24/-. Valencias, flats 7/- to 14/6 (special to 18/-. Lemons, flats 4/- to 10/- (special to 15/-. Apricots, prime flats 7/- to 14/- (special to 18/6, and others from 5/-); Peaches, prime flats 10/- to 18/- (special to 26/-, and others from 6/-). Plums, Santa Rosa, flats 8/- to 14/- (special to 18/6, and others from 5/-; Shiro, 3/- to 10/6. Grapes, open 9/- to 15/3. Strawberries, 17/- to 27/- per doz. punnets (special to 32/6). Cape Gooseberries, 4d. to 5d. per lb.

Tasmania.

Hobart, 24/12/27.

Cherries.—Best Florence, 15/- to 16/6; fair, 12/6 to 14/-; medium and pale coloured, 7/- to 10/6; Bigarreau, choice, 10/- to 11/6; medium, 6/- to 7/6; Blackheart, fair, 8/- to 8/6; other sorts, including Kentish, 4/6 to 7/- per ½-case. Gooseberries, 3/6 to 4/6 per ½-case. Cherry Plums, 3/- to 4/- ½-case. Strawberries, 6d. to 9d. per punnet. Raspberries, 4d. to 6½d. per punnet. Rhubarb, 7/- to 10/- per doz. bundles.

Queensland.

Brisbane, 21/12/27.

Local Fruit.—Apples, Stanthorpe, 8/- to 15/-; cooking, 7/- to 10/-; special, 11/- to 12/-; inferior, 3/- to 5/- bushel case. Lemons, 7/- to 9/- ½-bushel case. Limes, 7/- to 10/-. Pineapples, rough, 2/- to 7/- per doz., 8/- to 10/- per case; smooth, 2/- to 5/- per doz., 9/- to 12/- per case. Papaws, 1/- to 6/- case. Passion Fruit, 2/6 to 5/-. Mangoes, 2/- to 6/- bushel case. Peaches, 3/- to 6/- ½-case. Plums, Stanthorpe, 2/- to 7/-. Apricots, Stanthorpe, 6/- to 10/-. Grapes, white, 4d. to 6d.; black, 6d. to 8d. Nectarines, 4/- to 6/- ½-case.

Imported Fruit.—Oranges, special, 18/- to 20/-; standard, 12/- to 17/-; inferior, from 3/-. Cherries, 14/- to 19/- case. Lemons, N.S.W., 23/- to 25/- bushel case; Vic., cured, to 32/6; Californian, special, 62/- 1¼ bushel case.

South Australia.

Adelaide, 21/12/27.

The S.A. Fruitgrowers and Market Gardeners' Assoc. reports:—

Apples (eating), 5/- to 8/- per case; (cooking), 5/- to 6/- per case. Apricots, 7/- to 8/- per case. Bananas, 25/- to 30/- per crate. Cherries, 16/- to 18/- per case. Lemons, 25/- per case. Nectarines, 16/- per doz. lb. Oranges, 20/- per case. Peaches, 12/- to 16/- per case. Pears (eating, ripe), 12/- to 14/- per case; (cooking), 5/- per case. Plums (light), 6/- to 8/- per case. Raspberries, 6/- per doz. lb. Strawberries, 12/- per doz. lb.

V.C.C.A. MARKET REPORT.

The Victorian Central Citrus Association supplies the following report of the Melbourne market for the week ended December 16th:—

Valencias are still coming to hand in fair quantities. Good quality fruit is selling well. Choice Lemons, best counts, are also in good demand. Prices: Valencias: A grade, special 18/- to 24/-, extra higher; B grade, special 16/- to 22/-; C grade, special 12/- to 18/-; standard 1/- lower. Lemons.—Choice best counts, 19/- to 23/-, extra higher; Standard 14/- to 18/-.

New Zealand.

Dunedin, 16/12/27.

Messrs. Reilly's Central Produce Mart. Ltd. report:—

Large supplies of Strawberries and Cherries are now arriving. For choice Strawberries from 1/6 to 2/8 is the price obtainable; for jam, 10d. to 1/1 per pottle. Extra choice Cherries are realising 1/6½ per lb., others are being sold from 4d. to 9d. per lb. Plums.—Early consignments of Rivers realised 8d., and choice Cherry Plums 9d. Nelson and Christchurch Glasshouse Tomatoes, choice quality, are realising 1/- to 1/4 per lb. Local Grapes are making 5/-. Early Apricots will probably realise 10d. Bananas, choice Suvas realised 35/-, and Raratongan 30/-. N.S.W. Oranges have been selling at less than cost, prices ranging for choice fruit from 25/- to 30/-, and for wasty fruit from 12/- to 17/6 per case. Lemons have been scarce, and realising 35/- for N.S.W. Lemons. American, 65/-.

LONDON DRIED FRUIT SALES.

Sultanas Average £58/19/8 per ton.

The chairman of the Commonwealth Dried Fruits Board reports that the sales of Australian dried fruits with the London agency for the week ended December 15 represented 122 tons of Sultanas at an average of £58/19/8. This makes the season's total realisations 15,814 tons Sultanas at an average of £58/6/6; 4,792 tons of currants at an average of £42/10/2; 1,893 tons of Lexias at an average of £44/1/10.

AMERICAN FRUIT IN ENGLAND.

Liverpool (9/11/27).

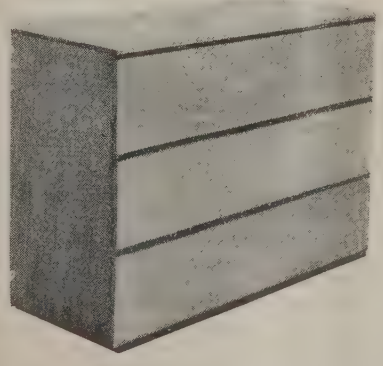
Messrs. J. C. Houghton & Co. report as follows:—

American Box Apples.—There is a fair amount of animation in this section, with a further small advance in practically all varieties. General outturn of box fruit is well up to standard.

Oregon and Washington—Newtown, 12/-, 18/6; Jonathan, 13/-, 15/3; Grimes, 12/6, 14/6.

Arrivals of American and Canadian Apples for the week ending 9th November amounted to 50,477 barrels and 17,445 boxes; Pears, 943 barrels and 4,987 boxes. Total arrivals this season to the 9th November were 331,646 barrels and 267,117 boxes Apples, and 10,188 barrels and 73,194 boxes Pears, as compared with 575,172 barrels and 443,131 boxes Apples and 49,566 barrels and 77,172 boxes Pears last season.

Softwood Pine Cases



Some Advantages in Favor of Imported Cases

1. Less weight to handle.
2. Quicker to cart to boat or rail, as 10 per cent. additional boxes can be loaded, due to box weighing only seven pounds.
3. Softwood shooks being less than half the weight of hardwood, they can be carted in a much shorter period.
4. All timber cut to exact sizes, making it an easy matter to assemble a symmetrical case.
5. Every piece of timber fit and ready for use, thereby eliminating waste.
6. Better returns to the growers.
7. Much less bruising of fruit in transit.

C. H. TUTTON PTY. LTD.

Royal Exchange Buildings - - 40 Queen Street, Melbourne

Phone: F 3837 *Telegrams & Cables:* "Tutbox," Melbourne

Queensland

Orchard Notes for January.

Cultivation.

ALL ORCHARDS, plantations, and vineyards should be kept well cultivated and free from weed growth; in the first place, to conserve the moisture in the soil, so necessary for the proper development of all fruit trees and vines; and, secondly, to have any weed growth well in hand before the regular wet season commences. This advice is especially applicable to Citrus orchards, which frequently suffer from lack of moisture at this period of the year if the weather is at all dry, and the young crop of fruit on the trees is injured to a greater or less extent in consequence.

Pineapple plantations must also be kept well worked and free from weeds, as when the harvesting of the main summer crop takes place later on, there is little time to devote to cultivation. If this important work has been neglected, not only does the actual crop of fruit on the plants suffer, but the plants themselves receive a setback.

Banana plantations should be kept well worked, and where the soil is likely to wash badly, or there is a deficiency of humus, a green crop for manuring may be planted. Should the normal wet season set in, it will then soon cover the ground without injury to the Banana plants. When necessary, Banana plantations should be manured now, using a complete manure rich in potash and nitrogen. Pineapples may also be manured, using a composition rich in potash and nitrogen, but containing no acid phosphate (superphosphate) and only a small percentage of bone meal, ground phosphatic rock, or other material containing phosphoric acid in a slowly available form.

Bananas and Pineapples may still be planted, though it is somewhat late for the former in the more southern parts of the State. Keep a good lookout for pests of all kinds, such as Maori on Citrus trees, scale insects of all kinds, all leaf-eating insects, borers, and fungus pests generally, using the remedies recommended in Departmental publications.

Fruit fly should receive special attention, and on no account should infested fruit of any kind be allowed to lie about on the ground to become the means of breeding this serious pest. If this is neglected, when the main Mango crop in the South and the early ripening Citrus fruits are ready, there will be an army of flies waiting to destroy them.

Marketing.

Be very careful in handling and marketing of all kinds of fruit, as it soon spoils in hot weather, even when given the most careful treatment. Further, as during January there is generally more or less of a glut of fresh fruit, only the best will meet with a ready sale at a satisfactory price.

Grapes are in full season, and in order that they may be sold to advantage they must be very carefully handled, graded, and packed. Well-colored fruit, with the bloom on and without blemish, always sells well, whereas badly colored, immature, or bruised fruit is hard to quit. One of the greatest mistakes in marketing Grapes is to send the fruit to market before it is properly ripe.

Bananas for sending to the Southern States require to be cut on the green side, but not when they are so immature as to be only partially filled. The fruit must be well filled but show no sign of ripening; it must be carefully graded and packed and the cases marked in accordance with the regulations under the Fruit Cases Acts and forwarded to its destination with as little delay as possible.

Pineapples should be packed when they are fully developed, which means that they contain sufficient sugar to enable the fruit to mature properly. Immature fruit must not be marketed, and if an attempt is made to do so the fruit is liable to seizure and the sender of the fruit to prosecution under the abovenamed regulations. Further, the fruit must be graded to size and the number of fruit contained in a case must be marked thereon.

For canning, the fruit should be partly colored; immature fruit is useless; and overripe fruit is just as bad. The former is deficient in color and flavor and the latter is "winey" and of poor texture, so that it will not stand the necessary preparation and cooking.

Drying Bananas.

Should there be a glut of Bananas, growers are advised to try and convert any thoroughly ripe fruit into Banana Figs.

The fruit must be thoroughly ripe, so that it will peel easily, and it should be laid in a single layer on wooden trays and placed in the sun to dry. If the weather is settled, there is little trouble, but if there is any sign of rain the trays must be stacked till the weather is again fine, and the top of the stack protected from the rain.

To facilitate drying, the fruit may be cut in half lengthways. It should be dried till a small portion rubbed between the finger and thumb shows no sign of moisture. It can be placed in a suitable box to sweat for a few days, after which it can be dipped in boiling water to destroy any moth or insect eggs that may have been laid on it during the process of drying and sweating. It is then placed in the sun to dry off any moisture, and when quite dry it should be at once packed into boxes lined with clean white paper. It must be firmly packed, when, if it has been properly dried, it will keep a considerable time. It can be used in many ways, and forms an excellent substitute for Raisins, Sultanas, Currants, or other dried fruits used in making fruit cakes and other comestibles. Banana Figs will be found useful for home consumption, and it is possible that a trade may be built up that will absorb a quantity of fruit that would otherwise go to waste. — "Queensland Agricultural Journal."

T. J. POUPART
Ltd.
Covent Garden, London, W.C.2
and 3 Love Lane, Eastcheap, E.C.2

The Premier Firm of Fruit Salesmen in Great Britain

Sale by Private Treaty only
(GIVES BEST RESULTS)

Commission the exclusive basis (purchase propositions cannot be considered)
Advances offered to cover freight and accessory charges

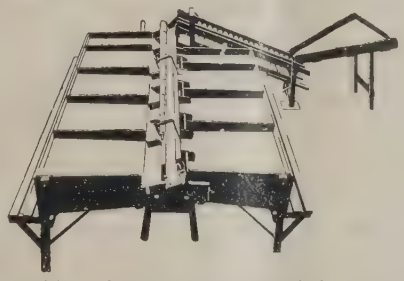
Victorian Representative:
FRED. J. ANDREW
416 Little Collins Street, Melbourne

SYDNEY:
Fruit Merchants
S. & M. Greenberg
No. 1 Store
Fruit Markets, Sydney
Also at Melbourne Markets
Tasmanian Shipping No. 161.
Victorian Shipping No. 42.
PROMPT RETURNS

"TO CHOOSE THE BEST IS WISDOM"

300% INCREASE

A Grower using a "Lightning" Fruit Grader says his daily output has increased by 3 to 1



Model 10 with Elevator Conveyor attached. Spring Floor Bin on each side of the machine. Each Bin will hold up to 3 bushel cases of fruit

JUST THINK OF IT

He now Packs 300 cases in the time he used to take to pack 100 cases. ARE WE NOT JUSTIFIED in saying that you CANNOT AFFORD to be any longer without a

LIGHTNING FRUIT GRADER

Our new Catalog No. 5 just issued contains several models which you have not hitherto seen. YOU WILL BE INTERESTED.

WRITE FOR A COPY

All Lightning Models are equally suitable for **APPLES, PEARS, PEACHES etc.**

We also supply **Gravity Conveyors, Nailing down Presses, Packing Stools** and the latest and most successful **Paper Holders etc.**

LIGHTNING FRUIT GRADER CO. 5 HODDLE STREET, COLLINGWOOD MELBOURNE, VIC.

Cable and Telegraphic Address: "Lightning," Melbourne

FRUIT FLY CONTROL.

Costs Less than Twopence Per Tree.

For some years now the N.S.W. Department of Agriculture has been conducting spraying experiments, using a poison foliage bait, for the control of both the Queensland and Mediterranean fruit flies. From the results obtained from these experiments it has been possible to formulate some very definite recommendations, and these were set out by the Senior Assistant Government Entomologist in the September issue of the "Agricultural Gazette."

As regards the damage done to Citrus fruit by the fly, the experiments carried out at Gosford proved beyond doubt that Oranges are attacked to only a very limited extent—counts showing only four infested trees in 4,039 trees examined.

The Bait.

The foliage poison bait consists of 5 oz. lead arsenate (powder), 4 lb. molasses, three gallons of water, and one gallon of fruit syrup. The amount of lead arsenate recommended is an increase over that used by many growers, and as the recommendation of 5 oz. powdered lead arsenate is based on practical tests it can be adopted with confidence.

The fruit syrup is prepared by slicing and boiling 4 lb. of inferior Peaches in one gallon of water until they become pulpy. The liquid is then strained off, the water lost by evaporation being replaced. The syrup can be preserved with salicylic acid, 8 grammes (two sevenths of an ounce) to the gallon, and the syprup can be kept and used as required.

Applying the Spray.

The best results can be obtained in stone fruit orchards by progressively spraying the orchard in accordance with the order in which the fruits ripen or are harvested.

Not more than five applications are necessary, the first being given five weeks before the fruit is harvested, and others at intervals of seven days. The bait is applied to the tree in patches—the whole tree should not be sprayed. The fruit should be avoided as far as possible, as the bait adheres to the surface, giving the fruit a spotted appearance.

Although the fly infestation of Citrus fruits is very slight, the poison foliage bait should be applied to Citrus trees for five weeks prior to the coloring of the fruit. This will kill those flies which have bred in the late stone fruits and have turned their attention to Citrus fruits during April and May. Those flies are responsible for the slight infestation found in Oranges and Mandarins, and cause the withholding or cancellation of fly-free certificates.

The fruit flies prefer to lay their eggs in the ripening fruit. Late Peaches, when allowed to ripen on the trees, may become seriously infested by both species of fruit flies. The practice, therefore, of marketing the fruit before it is ripe considerably reduces loss due to the fruit fly. The best results with the poison bait are obtained when the practice is combined with good cultivation and the careful destruction of all fallen fruit in order to reduce the incidence of the fruit flies.

Spray Equipment.

It is sufficient to apply the bait to the trees on two or three patches only, and any pump ordinarily used in orchard practice should prove satisfactory. An automatic "cut-off" nozzle is essential to avoid the bait being wasted in passing from tree to tree. The application of the bait is facilitated by the operator passing up and down the rows, applying the bait to the trees in patches first on one side and then on the other. The amount of bait per tree works out between six and eight fluid ounces, and the time taken to spray an acre not more than an hour. Assuming that 8 oz. of spray is used per tree, an acre will require about five gallons of spray, containing 6¼ oz. of lead arsenate and 5 lb. of molasses. The cost per acre should run out at approximately 2/6 per acre or 12/6 per acre for five applications. This works out at 1¾d. per tree.

Tasmania

Marketing - Crop Prospects - Control of Red Spider - Orchard Notes

(By Our Correspondent)

THE MARKETING of the 1927 Apple and Pear crop is practically completed, only very small shipments comprising five to eight hundred case lots being exported to Sydney during December. The quantities forwarded to mainland States have now reached 1,259,835 cases. Overseas exports are represented by 1,109,000, making a grand total of 2,368,835 exported for the season.

Prices, both upon overseas and State markets have generally proved satisfactory, and owing to the shortage in South-Eastern States, some very high figures were obtained for the late-keeping varieties. Consignments of "Tasma" (Democrat), realised up to 35/- per case; French Crab, 25/-; and choice Sturmer Pippin readily sold at 20/- during November and December.

The season has been the most prosperous experienced since the war, and the good returns will go a long way toward stabilising the industry, especially after the losses experienced in 1926.

Fruitgrowers are now busily engaged in making preparations for 1928, and the heavy crops will necessitate the early organisation of shipments, and supplies of packing materials. The increased production, both in Tasmania and upon the mainland must result in decreased prices, but if only a fair margin over costs can be averaged throughout the season, the industry will be in a better position than it has been for many years, and be brought back to approaching its pre-war prosperity.

Control of Red Spider.—The red spider has proved very troublesome during recent months, especially upon the older orchard areas, where the rough bark makes a convenient harbor for the insects.

A series of tests was conducted in the Cygnet district by the Fruit Expert (Mr. P. H. Thomas), in conjunction with the Agricultural Chemist (Mr. F. H. Johnstone), to try and ascertain the most economic spray which can be applied during the summer months that will be effective on the eggs and insects.

A number of contact insecticides such as oil emulsion, lime sulphur, "Clensel," "Sul Car," and "Imazu," were applied, also atomic sulphur, colloidal sulphur and iron sulphide.

The experiment was arranged so that the sprays were applied at safe strengths, and gradually decreasing the dilutions to observe the effect on eggs and insects, also any injury caused to the fruit or foliage.

The results demonstrated that whilst most of the contact insecticides destroyed the live insects, viz.:—Lime sulphur (1-60), oil emulsion (1-60), "Clensel" (1-40), at weak dilutions the treatments had very little effect on the eggs.

Even in cases where severe injury resulted to the leaves and fruit, viz.:—Lime sulphur (1-40), oil emulsion (1-30), "Clensel" (1-10), the eggs were practically unaffected at these strengths, and whilst all the live insects were killed, the trees were swarming with newly hatched insects three or four days after application. The experiment shows that only a partial control can be obtained by the use of summer applications only, and that the best procedure where late dormant applications have been neglected, is to apply two light covering sprays of either oil emulsion, lime sulphur or other contact insecticides at periods within ten to twelve days of each other—the first to kill the live insects, and the second to account for those hatching from the eggs subsequent to the first application.

The sulphur sprays, "Colloidal Sulphur" and "Atomic Sulphur" proved very disappointing. The action of these lies principally in the fumes that are liberated. An examination of the sections treated showed that they had little effect on the live insects, the infestation at three and seven days after treatment being very little different from the unsprayed area.

However, in cases of bad infestation, it is advisable not to neglect the strong oil emulsion (1-10), or lime sulphur (1-8) sprays. These should be applied as late as possible before actual growth commences.

Commercial orchards which have been treated with this spray, followed by a lime sulphur (1-30), at the "pink" period, are practically free of the pest, and a satisfactory control should be maintained throughout the season by application of weak strength lime sulphur, or the other contact insecticides mentioned.

Dual Inspection of Fruit.—The needless expense and unsatisfactory arrangement which has prevailed in recent years, by which Tasmanian fruit consigned to overseas markets should be inspected by Federal officers whilst that which is intended for interstate ports must be passed by

DENNIS & COOPER LTD.
COVENT GARDEN, LONDON, ENGLAND
Fruit Brokers and Commission Salesmen
FINANCIAL FACILITIES OFFERED
Make your Shipments of APPLES through
BENDER & CO. PTY. LTD.
Hobart Office: 4 Davey Street. 100 Elizabeth Street, LAUNCESTON
WHO WILL SUPPLY ALL INFORMATION

State officials was made the occasion for a deputation to the Minister for Markets early in December. The deputation comprised Messrs. J. P. Piggott, M.H.A., and P. H. Thomas, Fruit Expert, and was accompanied by the Federal Tasmanian representatives.

It was pointed out by the speakers that the same set of regulations governed the export of fruit to both the interstate and overseas markets, but the Federal authorities had one way of interpreting them and the State officials another. The consequence was that confusion existed amongst fruit shippers regarding the exact requirements of some of the regulations.

The most serious aspect of the dual control, however, was the needless additional expense, which amounted to a very considerable sum of money. The overseas shipping season only lasted 13 weeks, whereas the interstate season lasted nine months. Obviously the State officers were in the better position to economically provide for the handling of the overseas fruit by the employment of a few extra inspectors during that comparatively short period. It was also pointed out that Tasmania was the only State that had to employ Federal as well as State Inspectors.

Fruit Shipments
United Kingdom
and the Continent

W. D. PEACOCK
& CO.

24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

The Minister promised to go into the question with the officers of the Department, and to communicate his decision at a later date.

ORCHARD OPERATIONS FOR JANUARY.

(By P. H. Thomas, State Fruit Expert.)

JANUARY will be a busy month for fruitgrowers. The harvesting of berry and early stone fruits will be in full swing, and preparations for the export of the Apple and Pear crop occupy the orchardists engaged in this branch of the industry.

Cultivation.—The dry weather experienced will make the efficient cultivation of most areas a necessity to the healthy development of foliage and fruit. The soil should be maintained at a satisfactory tilth, and every opportunity taken to conserve any moisture supplied by immediately stirring the surface as soon as possible after the rains are experienced.

In many orchards, constant ploughing to the trees has been responsible for the formation of soil ridges. This is undesirable, and at this period an effort can be made to level the surface soil throughout the area. Orchard trees that are situated upon such ridges tend to develop a surface rooting habit, moreover, the loss of moisture from the region of the feeding roots is greater than where level culture is practised.

Spraying.—The principal operations will be directed toward the control of the **Codlin Moth.** In badly infected areas it will be necessary to apply at least three arsenate sprays to secure effectual control, the third spray being put on the first week in January. If the preceding November and December sprays have been applied in a thorough manner, the pest should be reduced to a minimum, even in the worst cases of infestation. In orchards where the early sprays have been omitted it will be necessary to thoroughly examine the trees and gather all fruits that are infested. These should be boiled or burnt immediately after picking.

In applying arsenate of lead there is a tendency amongst some growers to mix the spray at a much greater strength than is recommended. This is quite unnecessary.

From the tests which have been conducted by the Fruit Division, the different reputable brands upon the market can be used at a strength of 1 lb. to 30 gallons (powder), and 1 lb. to 16 gallons (paste). In making the applications it is desirable that an Arsenate having a high suspensory test be used.

During the month the **Pear slug (Selandria cerasi)** will be in active operation. This insect feeds upon the leaves of a number of deciduous fruits, principally attacking Cherries, Pear and Plums. It is easily controlled by applying an Arsenate spray at the strengths detailed above.

In certain orchards the root fungus, **Armillaria mellea** is causing injury to a number of trees. If treated in the initial stages, the disease may be controlled. The recommended method is to bare the roots at the base of the trunk, making a saucer-like depression, and thoroughly soak the soil and roots with a mixture of sulphate of iron (1 lb. to 4 gallons of water). This should be carried out when the soil is in a fairly dry condition.

Marketing Preparations. — Case material should be on hand as soon as possible, and carefully stacked to allow for drying. One of the best methods to ensure this being carried out satisfactorily is the square system. The ends and sides are stacked in pairs at right angles in the form of a column and weighted at the top to prevent buckling or warping. This allows for adequate ventilation and the production of seasoned cases, which are preferable for the export trade.

It is desirable also to obtain the other materials necessary for packing and marketing well in advance of the period of operation. The essentials for giving facility in handling a large quantity of fruit are convenience and systematic working. Most fruit packing sheds could do with a good overhaul and a re-arrangement to effect these improvements. The ideal method is to carry out the grading and packing of the fruit in the centre of the shed; overhead light in the form of sky-lights being available for this purpose. Fruit received from the orchard can then be stacked in the most convenient position without interfering with the light, similarly that which is branded and ready for export may be assembled at the main outlet.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.

Manufacturers IXL Jam and Canned Fruits.

Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.

All Orchard Supplies available at all times.

Agents for—

Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.

H. JONES & CO. LTD.,
HOBART

Budding.—Toward the end of the month, "budding" may be commenced of stone fruits, such as Cherries, Plums and Apricots. In order to secure good results the trees should be making vigorous growth, the bark

"lifting" freely for the operation. A light dressing of nitrate of soda or sulphate of ammonia applied three or four weeks before the operation will often assist toward this condition, the crystals being hoed into the soil around the trees to be treated. In obtaining scions it is desirable to choose bearing trees which are known to be vigorous, thrifty, and good croppers. Care should be also taken to see that the scions selected are matured, the bark being firm and carrying well developed buds. "Clean cutting," and "tight tying" with raffia are the essentials to success.

TASMANIA.

Fruit Crops.

(By P. H. Thomas.)

GOOD RAINS have been experienced throughout the State and materially benefited the fruit crops, especially in the Derwent Valley and Bagdad and S.E. districts, where the continued dry spell was beginning to affect the stone fruits. The prospects at the beginning of December may be summarised as follows:—

Apples.—The Apple crop should be slightly above normal; the estimate for the whole State gauged from the district reports indicates that the yield will be in the vicinity of 3,750,000 bushels.

A late infection of black spot, due to the humid conditions experienced during November and early December, is in evidence in some districts, particularly upon susceptible varieties such as **Cleopatra, Sturmer, Scarlet** and **Crofton.**

Red spider is also prevalent in certain centres, especially upon the older areas, where the rough bark gives abundant shelter to the insects.

Growers are actively engaged in combating these pests, but the weather conditions that are experienced during December and January will also play an important part in arresting their development.

With the exception of **Scarlet, French Crab, Dunns and London Pippin,** which have set rather irregularly, the principal varieties are all showing prospects of heavy to normal yields, The extent to which diseases and pests may affect these, however, cannot be gauged until the beginning of the New Year.

Apricots.—The recent rains have benefited these fruits considerably, and the prospects of the generally heavy setting should materialise.

Growers are now busy thinning the heavily laden trees in order to ensure a high percentage of quality fruits which are in demand for canning and preserving purposes.

The present indications are that the yield will be approximately 25 per cent. above normal (approximately 125,000 bushels).

Pears.—The setting has proved to be very irregular, and it is evident that at the outside, not more than a 60 per cent. crop can be anticipated (approximately 180,000 bushels). **Winter Cole, Beurre de Capiaumont, Napoleon, Packham's Triumph** and **Keiffer** generally show prospects of the best yields, but the principal export varieties, particularly **Josephine de Malines, Beurre Bosc, Winter Nelis, Glou Morceau** and **Doyenne du Comice** are only bearing light to medium crops.

Plums.—The crops on the whole are very patchy, especially such varieties as **Golden Drop, Greengage** and the different Prunes **(D'Agen, Italian** and **Imperatrice).**

An approximate estimate, which is difficult, would be in the vicinity of a 60 per cent. crop (approximately 40,000 bushels).

Cherries.—These are also a light to medium crop; **Florence,** and some of the later varieties are bearing well, but the early kinds are generally returning only light yields.

Berry Fruits.—The recent rains have also proved most opportune for those fruits, and should the weather continue warm and fine, without excessive moisture or hot winds, at harvesting, a record yield of Strawberries, Raspberries, Black and Red Currants and Loganberries will be gathered.

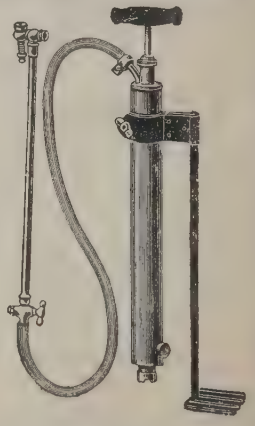
Exports.

Owing to the reduced American production, and the reported heavy crop prospects upon the mainland, fruitgrowers will forward a large proportion of their Apple and Pear crops to the "overseas markets," and there is every indication that the figures will reach the record "overseas" export of 1926, viz. (2,000,000 bushels).

Bookings are already being sought for direct shipments to European ports, and it is evident that consignments will be well distributed between these and the principal ports of the United Kingdom.

This should prove advantageous to exporters, especially as there is every indication that the total quantities exported from Australia and New Zealand will approximately double that forwarded during the 1927 season.

FOR
SPRAYING, LIMEWASHING and DISINFECTING
RELIABLE AND EFFICIENT MACHINES ARE ESSENTIAL
Before Placing Your Order ASK A FRIEND
WHO HAS USED A
VERMOREL "ECLAIR" SPRAYER
TO TELL YOU HIS OPINION OF IT
ACTUAL USE IS THE BEST TEST



The types made include the following:—
HAND SPRAYERS
PNEUMATIC HAND SPRAYERS
KNAPSACK SPRAYERS
PNEUMATIC KNAPSACK SPRAYERS
BUCKET PUMPS
BUCKET SPRAYERS
SINGLE WHEELED SPRAYERS
TWO WHEELED HAND POWER SPRAYER
high pressure model (220 lbs. per square inch)
CART SPRAYERS
AUTOMATIC HORSE DRAWN SPRAYERS
POWDER BELLOWS
KNAPSACK POWDER SPRAYERS
AUTOMATIC HORSE DRAWN POWDER SPRAYERS
3 H.P. MOTOR SPRAY OUTFITS
LIQUID CAPACITIES 1¾ pints to 88 gallons. PRICES FROM 2/9 to £80 each
The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants.
Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—
COOPER, PEGLER & CO. LTD., 24d CHRISTOPHER STREET, LONDON, E.C.2.

FIGHTING INSECT PESTS IN THE ORCHARD.

Woolly Aphis.

The Aphelinus mali (woolly aphis parasite) has bred out in great numbers this year, and is now fairly well distributed throughout the principal orchards in the State. The Science Branch of the Dept. of Agriculture has sent out a further supply during the last month to many parts of the State. The Apple twigs containing the parasites were probably the best that had been sent out yet. They were obtained from orchards at Shepparton.

Pear and Cherry Slug.

These greenish slimy caterpillars are still in fairly large numbers on the leaves of the Pear and Cherry trees. Dust trees with lime, soot or ashes. When fruit is ripening use Hellebore.

Peach Aphis and Cherry Aphis.

Continue spraying with nicotine sulphate or black-leaf 40.

Scale Insects.

Apple Mussel Scale, San Jose Scale, Olive Scale, Red Scale, etc.—The young scales are now moving. Spray with tobacco water or Benzole emulsion.

Painted Apple Moth.

The caterpillars of this most destructive moth are common at the present time on fruit trees. They are from an inch to an inch and a quarter in length when full grown, and densely covered with tufts of hairs. To prevent the moths from depositing their eggs on the leaves of the trees spray with benzole emulsion 1 in 5. When caterpillars are on trees spray with arsenate of lead 1 in 25. Thoroughly spray underside of leaves also.

The Bryobia Mite and Red Spider.

These mites are exceedingly numerour during the warm and hot weather. They attack all kinds of fruit trees, especially Apples. The leaves attacked have a peculiarly speckled appearance, owing to the rupture of their cells. Spray with tobacco water, nicotine sulphate, benzole emulsion, or black-leaf 40. Spray underside of leaves. Use misty spray.

Cherry Green Beetle.

In some districts these small greenish insects are in vast numbers on Cherry and Apple trees. They have almost completely defoliated Apple trees in some orchards. Spray with arsenate of lead, 1 in 20. When fruit is ripening, use Hellebore.

Rutherglen Bug.

When noticed use the phenyle spray. This is prepared as follows:—

Take 1 quart of phenyle, 3 lb. washing soda, 1 bar yellow soap, 40 gal. water. Shred the soap and dissolve it in hot water, to which the other ingredients should be added, and the mixture made up to 40 gal.

Citrus Aphids.

The young shoots of Citrus trees are being attacked by myriads of Citrus aphids. These insects suck out the sap from the young growths, which turn black and die back. Use tobacco (nicotine) sprays.

Cutworms on Apples and Other Fruits.

Cutworm caterpillars are still very numerous in many fruitgrowing districts. They climb into the trees and eat small holes in the fruit, causing a rusty-colored patch to form on the Apples when ripe. Spray with arsenate of lead, 1 in 25.

Vine Scales.

This is one of the largest scale insects known, color of adult scale yellowish brown; eggs, cream colored. This scale attacks Oranges, Grape vines, Plum trees, etc. The young are now hatching, and spraying should be done. Use any of the nicotine (tobacco) sprays. Nicotine sulphate or black-leaf 40 are good contact sprays.

Vine Moth.

Caterpillars of the common vine moth and the silver-striped vine hawk moth are rather numerous on vines at present. They are easily controlled by the arsenical sprays.

Codling Moth.

A recently issued pamphlet on the Codling Moth and treatment for same is obtainable from the Department of Agriculture, Melbourne, free of charge.

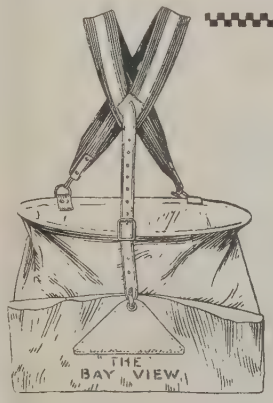
An article on this subject appeared in the issue for December, 1927, p. 489.

THE SWAGMAN'S TOAST.

Here's health and wealth to the wheel that turns the world!

If life were a thing that money could buy, sure, the rich would live and the poor would die.

But God in his mercy has willed it so, that the rich and the poor together must go.



"Bay View" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

Here at Last!

PATERSON'S CONCENTRATED

"CLENSEL"

British Product.

Insecticide and Fungus Destroyer

The only combination Spray in the World.

The Spray that has achieved Remarkable Results throughout England and India.

Write for Particulars of Results of Tests by Australian Fruitgrowers.

Once Tried Always Used.

Eradicates on contact Red Spider, Scale, Thrips, Curly Leaf, Green Fly, Black Rot, Mildew, etc.

Non-poisonous. Non-injurious to trees or foliage.

"CLENSEL" can be used any time of the year.

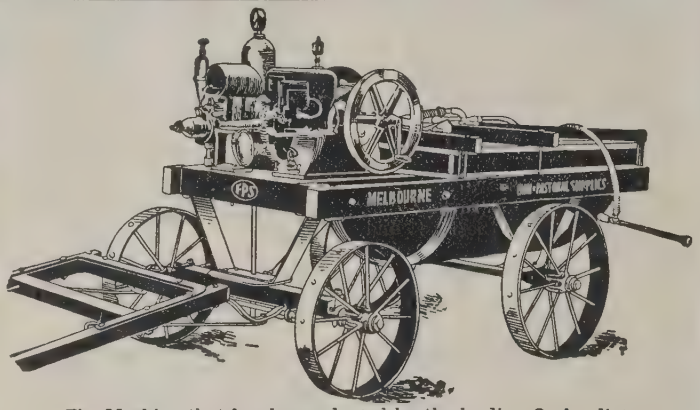
Easily mixed. No other spraying solutions to be added. Badly infected orchards can be effectively cleaned with two applications of CLENSEL.

Further particulars from—

BRUCE ANDERSON——CLENSEL (Aust.) AGENTS

56 Hardware Street, Melbourne

THE NEW HERCULES SPRAYER



The Machine that has been adopted by the leading Orchardists of Victoria, and proclaimed by them to be the most efficient and reliable Orchard Sprayer obtainable.
Supplied with 1¾, 2¾ or 3½ b.h.p. HERCULES Engine, geared direct to Metters' Double-acting Power Pump. Built also on two-wheel transport.
Write at once for particulars, or apply for a free demonstration in your own orchard.

THE FARM & PASTORAL SUPPLIES
PTY. LTD.
Machinery Merchants,
500 BOURKE STREET, MELBOURNE

IMPERIAL FRUIT SHOW.

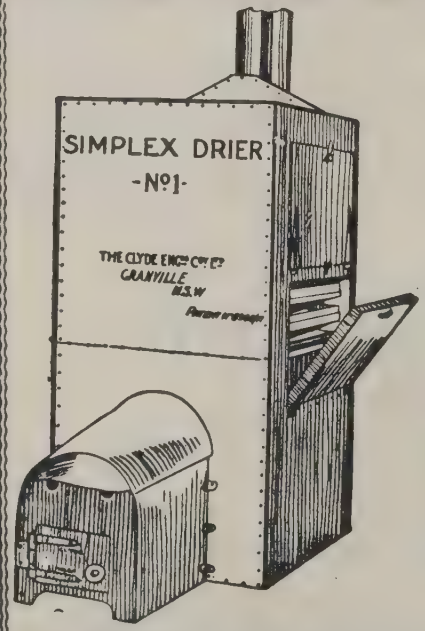
Held at Manchester.

To the Editor.

Sir,—As in 1923, the Imperial Fruit Show has again been held at Manchester, and, according to cable advices to hand last week, was very largely attended. The official representative of Australia House intimates that the show aroused considerable interest, in contrast to the lukewarm attitude of the public when it was held in London last year, and he recommends that in future the show should be held in the provinces.

Victorian Navel Oranges of excellent quality were exhibited, and Australian firms were the only entrants in the canned fruits competition. For Pears the Ardmona Company won a gold medal, and the Kyabram Company silver and bronze medals. For Peaches the Shepparton (Victoria) Company secured a gold medal, the "Ibis" brand, packed at Leeton, N.S.W., by the Irrigation Commission, a silver medal, and the Shepparton Company a bronze medal.

Manchester is the most important market and distributing centre for homegrown and imported fruit required in the Northern and Midland counties of England, which is readily



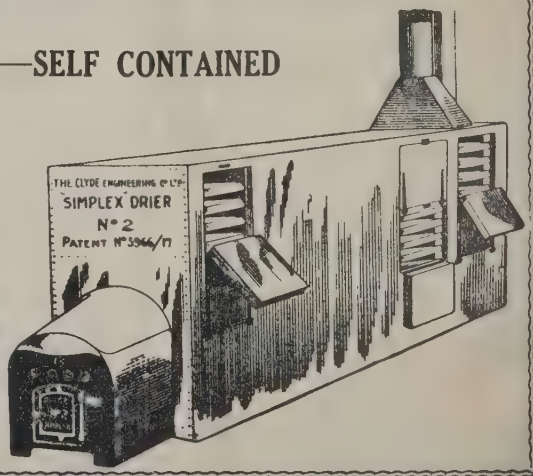
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ld.
GRANVILLE, N.S.W.

understood when it is remembered that it is the nearest port for all the most important manufacturing centres in that area, including Birmingham, Bolton, Bradford, Coventry, Derby, Halifax, Huddersfield, Leeds, Leicester, Nottingham, Sheffield, Stoke, Wolverhampton, and many other well-known places.

The steady demand for all varieties of produce ensures that prices at Manchester will compare favorably with those realised at any other British market, and reference to the average prices during the last export season (advertised in this issue), serve to prove that producers and exporters will do well to look more closely into the possibility of developing or extending direct trade with the economic area served by Manchester.

Only two steamers carried Australian and Tasmanian fruit direct to Manchester last season, but the fact that fruit discharged at London, Hull, and other ports was forwarded every week for sale at Manchester proves the confidence merchants have in the strength of the Manchester market. Growers and shippers would receive larger net returns, however, if unnecessary handling and transport charges, and the accompanying risks of deterioration and pilferage were cut out by direct shipment to Manchester Docks.—Yours, etc.,

WM. JNO. WADE,
Rep. Port of Manchester.
8 Bridge-street, Sydney.

SUBSCRIBERS' PAYMENTS RECEIVED.

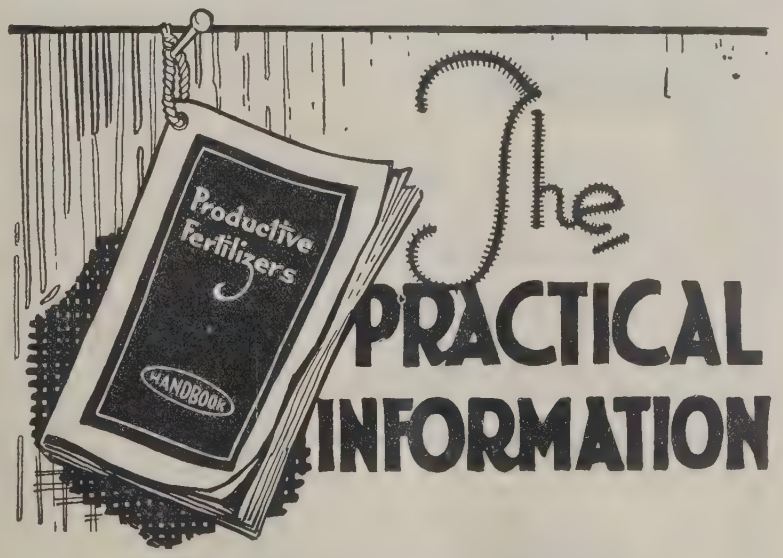
We acknowledge with thanks having received, at Head Office, the following renewal subscriptions from our readers from September 20 to December 10, 1927. Except where otherwise stated the payment credits the subscriber to June, 1928. The list does not include payments to our branches and agents in the other States, nor deliveries through our wholesale distributors.

F. J. Andrew, J. W. Aspinall, G. A. Agars, G. M. Arnold, G. E. Archer, E. C. W. Allen (June, '27), B. A. Arndt (June, '29), P. R. Beauchamp (Oct., '27), Estate of Dr. Benjafield (Dec., '27), T. E. Butler, F. G. Brown, E. Buxton & Co., Wm. Boatman, C. Bunn, G. Brown, A. W. Bowen & Co., A. Black, C. W. Booth, H. Bishop, T. B. Brooks, P. G. Baxter, J. Boon & Sons, J. P. Bainbridge, Major A. Brown (Sept., '28), F. B. Bolton & Co. (Sept., '28), H. R. Black (Nov., '28), Barrett, Lennard Bros. (June, '29), S. Braithwaite (Dec., '27), G. E. Cross (Oct., '27), C. Clinch (Dec., '27), Cawthron Institute, A. J. Clark, G. M. Cornwall, R. T. Castles, Comino Bros., J. Cane, Cox Bros., Cutler Mfg. Co. (July, '28), H. Clement (Sept., '28), California Packing Corp. (Nov. '28), Co-op. Fruitgrowers of Otago Ltd., F. Copley (June, '30), W. Clegg (Feb., '32), W. Downham (June, '27), F. W. Duncan (Dec., '27), A. Davis, Murray Dawson (June, '31), E. C. Elder, F. Elwood, J. Thos. Edis, J. S. Earles, W. N. Ellis (Nov., '28), B. Francis (Oct., '27), D. Fopp, R. Field, A. Flintoff (Sept., '28), Filsell Bros. (June, '29), Gosford Co-op. Packing House Ltd., M. Gibson, J. Gibbs, T. R. Glennon, J. H. Gregory, H. R. Harris (Dec., 29), M. J. Herbert, O. E. Halliday, T. Hayman, Higgs Bros., Cliff Hill, Hicks Bros., D. L. Hatfield (Sept., '28), C. L. Ivey (June, '31), W. S. Jackson (Oct. '27), E. Jones (Nov., '27), F. B. James (Sept., '28), P. Jacob, P. H. Knappler, W. H. M. Kilgour (Sept., '28), J. H. Kidd (June, '29), A. G. Lucas (Oct., 27), F. D. Love (Dec., '27), J. Lumb, H. A. Laffer, J. P. Larkins, P. W. Light, A. Lansdowne & Sons, A. J. Mattingley (Oct., '27), Mapleton Farm College, G. J. Mackay, A. G. M. Mitchell, J. H. Morton, W. Moffatt (Aug., 28), A. A. Magarey (Nov., 28), McFarlane & Co., A. McEwen (Oct., '28), S. McIntosh (Nov., '28), F. Neumann (June, '27), H. E. Napier, J. B. Nugent, P. Owen (Aug., '27), C. J. O'Mahony, F. Page, Capt. A. W. Pearse, W. Powell, W. C. Page, C. Piesse & Co., W. H. Passmore, R. P. Phillips, G. Pole, Theo. G. Pfeiffer (Dec., '27), J. Passmore (June, '27), M. X. Pickstone (Aug., '28), L. S. Perkins (Sept., '28), C. Plush (Nov., '28), J. W. Pooley (Nov. '28), T. Russell, A. Reye, W. J. Ross; E. L. Ross, A. E. Ratcliff (June, '30), W. E. Rowling (June, '30), H. Slade, H. W. Smith, W. Sandford, J. C. Stanton, J. L. Smith, J. Stocker, C. Smith, E. F. Smith, Turners & Growers Ltd., John Tully, O. A. Tucker, A. W. Taylor (Aug., '28), E. W. T. Taylor (Sept., '28), W. H. Palthe van Wesenhagen, Geo. Vincent, Victoria Cross Mfg. Co., F. D. Virgo (June, '29), W. R. Woodham, J. Wishart, Williamstown Branch, Agric. Bureau of S.A. (Oct., '28). T. York.

McAndrew.—"Hooray! The wind has changed."

Convalescent Wife.—"Well, mon, what of it?"

McAndrew.—"Ye ken the doctor said ye needed a change of air."



The Practical Information

That this little book contains will prove helpful to anyone who gets a living from the soil.

Entitled "Productive Fertilisers," it stresses the great importance of complete fertilisers, giving prominence to

SULPHATE OF AMMONIA

as the most economical source of the supply of nitrogen that can be obtained in Australia.

It shows, in brief, the advantage of using a nitrogenous element that is purely Australian.

Write today for your copy to

THE METROPOLITAN GAS CO.
196 Flinders Street - Melbourne

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE." 499 LITTLE COLLINS ST. MELBOURNE.

SULCAR

CARBONISED SULPHUR

Spraying Mixture.

THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED

DOES NOT BURN.

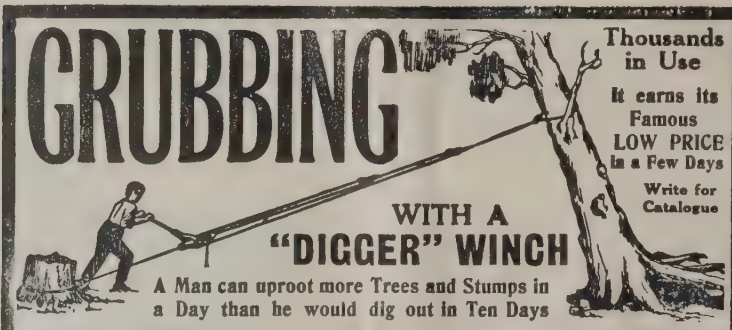
Manufactured by

SINCLARE & Co.

BOX 3, KING ST., P.O.-SYDNEY.

(Works,-Alexandria)

GRUBBING



Thousands in Use

It earns its Famous LOW PRICE in a Few Days

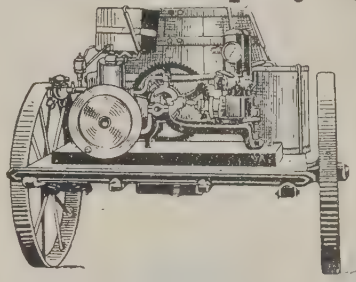
Write for Catalogue

WITH A "DIGGER" WINCH

A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days

QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

Effective Spraying means Better Crops and Bigger Profits



Made in Single and Double Plunges 3 and 4 horse power

You can have the same results as thousands of other growers by using

The BAVE-U (Pioneer Australian) POWER SPRAYER

All BAVE-U SPRAYERS are fitted with our Patent Suction Pipe Strainer, which saves the time that is wasted through having to clean choked nozzles

Declared by a number of users to be worth its weight in gold

Write for Catalogue to the Makers:—

RUSSELL & CO. BOX HILL, MELBOURNE VICTORIA

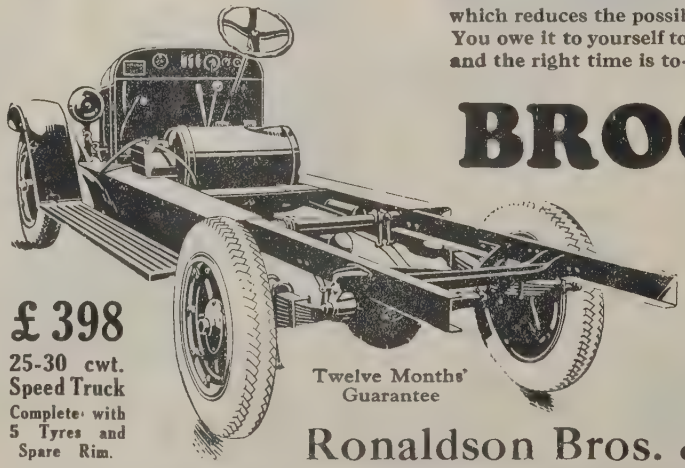
ENGINEERS

AGENTS:—SOUTH AUSTRALIA—PREMIER MACHINERY CO., Morphett St. Adelaide. NEW SOUTH WALES—E. ROBINSON, 333 George St., Sydney

... the truth about Truck economy

25-30 cwt.—35cwt.—2 and 3 ton Models

LOW initial price is sometimes mighty tempting to those not acquainted with Truck values. But experienced Truck owners know that good Trucks cost much less per ton-mile, per month and per year. This is true economy. The "Brockway" 25-30cwt. and 30-35 cwt. speed Trucks are the ideal combination of sturdiness and easy riding, of economy and dependability, of speed with safety. They are specially adapted to the Orchadist's requirements. The well balanced chasses with low centre of gravity gives low cushioning which reduces the possibitity of damage to goods to a minimum. You owe it to yourself to investigate the "Brockway" line of Trucks and the right time is to-day---NOW.



BROCKWAY

£398

25-30 cwt. Speed Truck

Complete with 5 Tyres and Spare Rim.

Twelve Months' Guarantee

ORCHARDISTS WHO HAVE RECENTLY PURCHASED BROCKWAYS.

TAINTON, H. E. .. Forest Hill
LECHTE, A. .. .. .. Burwood
CORBETT BROS. .. Doncaster
WHITTEN BROS. .. Doncaster
WOOD, F. C. .. .. .. Ardmona
FRITSCH, F. .. .. .. Merricks

Ronaldson Bros. & Tippett Pty. Ltd.

Showroom 536a BOURKE STREET, MELBOURNE

SERVICE STATION : 527 SPENCER STREET MELBOURNE.

Fordson Cuts Production Costs

Every farmer knows the value of work done on time. Urgent work is often delayed by unfavourable weather. This proves costly when crops are planted late in a poorly prepared seed bed.

With a Fordson, you can get your ploughing done, and your crop planted on time —every moment of favourable weather counts, and a greater amount of work is accomplished by its speed and ability to work tirelessly and unceasingly. The result is a good seed bed made on time. Fordson farming is more profitable because you can dispose of six to eight horses, and keep productive live stock instead.

Mr. A. W. Major, of Iraak, via Carwarp, Victoria, sends us the following report of Fordson operations, and states that the cost of repairs for two years did not exceed £5—convincing proof of Fordson economy.

Ploughing: 5 furrow plough, 10 acres per day; consumption, 1¼ gallons kerosene per acre.
Drilling: 33 tyne 16 row 9½ feet combine drill and cultivator, 22 acres per day; fuel consumption, 3-5ths gallon per acre.
Pumping: 6 in. centrifugal pump; fuel consumption, ⅓ gallon per hour.
Chaffcutting: 9½ in. mouth chaffcutter, consumption, ½ gallon per ton. Power kerosene was used throughout.

Ask your nearest Ford Dealer for a demonstration of Ford products on your own property.

Fordson

THE UNIVERSAL TRACTOR

£195 Complete with Fenders and Pulley. F.O.B. Ford Works in this State.

Ford

ONE TON TRUCK

Complete with Standard Body, F.O.B. Ford Works in this State **£160**

FORD MOTOR COMPANY OF AUSTRALIA PTY. LTD. BRANCHES IN ALL STATES

FIRE Respects No One !

If fire should come your way are you ready?

Remember last summer, and the previous one; orchards, crops, stock, homes, all vanished in the merciless blaze.

It may be YOUR turn this summer!

Be prepared, give the Fire Demon no chance, master him at the outset.

At the recent Dubbo Bureau Conference, Mr. Matchet, the well known farmer of Wychitella, said that during last summer's fires, 15 men, using ordinary methods, had been unable to extinguish 20 yards of fire, whereas miles had been put out with water shot from a 160 gallon cart.

It's the pressure that does it. Besides, there is no waste of water, a matter of vital importance in most districts. Every drop can be directed at high pressure straight at the seat of the fire. Our Firefighting equipment includes a type that will suit your purpose and your purse.

This pump will convert your car into a speedy fire engine.

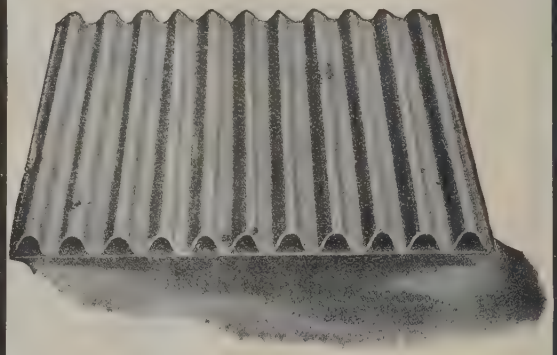
The illustration above shows how simply it is clamped to the footboard of a motor car. A specially constructed 30 gals. Tank goes in the body of the car. Whilst the driver operates the pump, anyone in or out of the car can use the hose—and use it with effect. The water is delivered at high pressure—up to 200 lbs. per square inch—whilstthe car is travelling or stationary This is a remarkably handy and efficient fire fighter for covering a distance, and can easily be used on any other vehicle.

The outfit can also be used for other purposes.

Call or Write for further Particulars

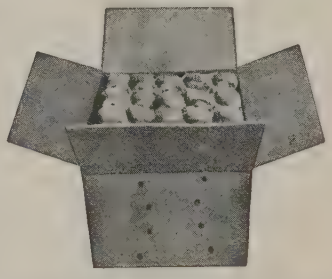
McPherson's
Proprietary Limited

582 Collins St., MELBOURNE.
51-65 Bathurst St., SYDNEY.
116-130 Waymouth St., ADELAIDE.



Corrugated Strawboard Liners for Fruit Cases

A Safe Insurance Against
BRUISED FRUIT



CORRUGATED CASES
SUITABLE FOR FRUIT PACKING

Full particulars on application to

J. Fielding & Co. Ltd.
Buckingham and Chalmers Sts.
SYDNEY, N.S.W.

Take Advantage of the Two-Fold Action of "Black Leaf 40"

Kills by CONTACT and FUMES

While the effectiveness of "Black Leaf 40" in killing Aphis, Thrips, Woolly Aphis' and similar sucking insects is primarily dependent upon direct contact (wetting), a secondary advantage is furnished by the "gassing" effects of the penetrating nicotine fumes set free in the spraying material. This two-fold action helps definitely towards securing the highest percentage of efficiency—and is an advantage that is not possessed by any non-volatile spraying solution.

Also Assists Worm Control

At dilutions recommended for killing Aphis, "Black Leaf 40" kills the larvae of many "chewing" insects. Newly-hatched worms absorb the nicotine into their soft, tender bodies, and are very susceptible. By using stronger solutions of "Black Leaf 40" even more mature worms may be killed.

"Black Leaf 40" may be combined with standard orchard sprays, such as Lime-Sulphur, Bordeaux Mixture, Oil Sprays, Lead Arsenate, etc.

Tobacco By-Products & Chemical Corporation (INCORPORATED)

LOUISVILLE, KENTUCKY, U.S.A.

Sold by leading Dealers in Australia and New Zealand.

"Black Leaf 40" 40% Nicotine

KILL APHIS "Black Leaf 40" DUST · SPRAY

Spitalfields Market, LONDON

(Owned and controlled by the Corporation of the City of London)

Supplies a Population of 9,000,000

Nearest Market to

THE PORT OF LONDON
DOCKS AND WHARVES

with Railway connections to all parts of

THE UNITED KINGDOM

EXCEPTIONAL FACILITIES FOR
RAPID HANDLING
ALL CLASSES OF FRUIT AND VEGETABLES
HOME GROWN OR IMPORTED

— Extensions now in hand will make this the —

LARGEST FRUIT & VEGETABLE MARKET IN GREAT BRITAIN

BRITISH AND COLONIAL GROWERS CONSIGN TO

SPITALFIELDS MARKET

General Information can be obtained from:—

SUPERINTENDENT, SPITALFIELDS MARKET, LONDON, E.1.

Fruit For Great Britain

THE PORT OF HULL

is

Excellently Equipped for Rapid Handling of Fruit Cargoes
Nearly Seven Million Packages Imported during 1925
SALES HELD THROUGHOUT THE YEAR

QUICK DESPATCH

by the

London & North Eastern Railway

To All Parts of the Country

Further information gladly given on application to
MESSRS BURNS PHILP & CO. LTD., 84 William Street, Melbourne or Head Office, Sydney and Branches

We are offering the following New Varieties for the Coming Planting Season.

APPLE *"Lalla,"* a very highly colored Delicious which originated in our Lalla Orchard.

NEW BLACK CURRANT, *Daniel's Late,* two months later than any other variety, heavy cropper, large berries.

NEW RASPBERRY, *Lloyd George.* In R.H.S. tests, this variety was the leading one, strong grower, heavy bearer, large fruit of the highest quality. Every Fruitgrower should plant these.

Particulars Inquire **FRANK WALKER,** Nurseryman and Florist

110 Brisbane Street, Launceston

SALES DEPOTS.

No. 542-543 Covent Garden Market.
No. 97, 98, 101 Long Acre.
No. 1 Endell Street.

Cables—Spinach, London.
Codes—A.B.C., 5th Edition; Bentley's.

OFFICES.
97, 98 101 Long Acre.

FRUITGROWERS!

Consign your Fruit to

PASK, CORNISH & SMART

——COVENT GARDEN——
LONDON W.C. 2, England

THE PROGRESSIVE FIRM of FRUIT SALESMEN

Who receive consignments of **Apples, Pears, Oranges,** and **Grapes** all the year round, thus assuring a clientele of best buyers. Spacious Sale Rooms suitably situated to display fruit to very best advantage.

Reasonable advances made against Bills of Lading. Balances paid by cheques drawn on Australasian Banks.

Sales entirely by Private Treaty

Last year handled more than ONE MILLION Packages of English, Colonial and Foreign Fruits.

REPRESENTED AT

TASMANIA	SOUTH AFRICA	LAS PALMAS
WESTERN AUSTRALIA	NEW YORK	AZORES
	TENERIFFE	

And all Principal Fruit Growing Centres in England, France, Spain Belgium and Holland.

Tasmanian Representatives— **E. R. COTTIER & CO., A.M.P. Buildings, 88 Collins St., Hobart.**

Western Australia Representatives—
THOMAS HAYWOOD & SONS LIMITED, Bunbury, W.A.

REPRESENTATIVES REQUIRED in South Australia, Victoria and New Zealand.

FOR BEST FRUIT PRICES —

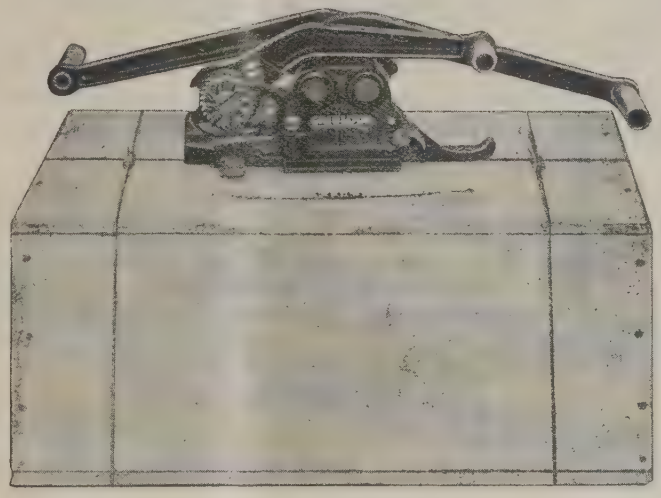
WIRE-STRAP YOUR CASES

in the

LATEST AND MOST IMPROVED METHOD

The

"GRIPLOCK"



The Griplock Improved Box Strapping Tool.

is the most efficient as well as the cheapest BOX STRAPPING method on the market.

IT IS THE ONLY TOOL WHICH OPERATES A HARD WIRE

Once GRIP-LOCKED the wire cannot be tampered with.

Full particulars from :— Phone : J 2009

GRIPLOCK—Safe Seal Systems, Waltham Place, Richmond, Vic.

Sole Australian Agents for Root Dusting Mechanical Appliances

(Patented)

Atomol Dusts Ltd.

Manufacturers of

DUSTING MATERIALS used as **INSECTICIDES & FUNGICIDES ON PLANT LIFE**

DUMPHRIES PLACE
off GILLES STREET
ADELAIDE

Growers would be well advised to allot part of their orchards this coming season for the purpose of making a comparison between dusting and spraying. Providing that the correct dust and dusting mechanical appliances are used, we are convinced that dusting will be generally adopted for controlling all insect and fungi pests.

Atomol dusting material and Root mechanical dusting appliances combine all the essential features of successful dusting. One man with a Root Hand Dust Gun, costing only a few pounds, will cover as much ground as a power spraying machine costing £100 or over in a given time.

SEND FOR OUR PAMPHLET, OR ENQUIRE THROUGH THE UNDERMENTIONED INTERSTATE AGENTS:—

VICTORIA:—
Irymple Packing Co., Irymple.
Irymple Packing Co., Merbein.
Sarnia Packing Co., Mildura.
Humphreys & Conran, Red Cliffs.
Mr. G. W. Hall, Box 1, Bunyip.

NEW SOUTH WALES:—
Anderson & Co., George St., Sydney.

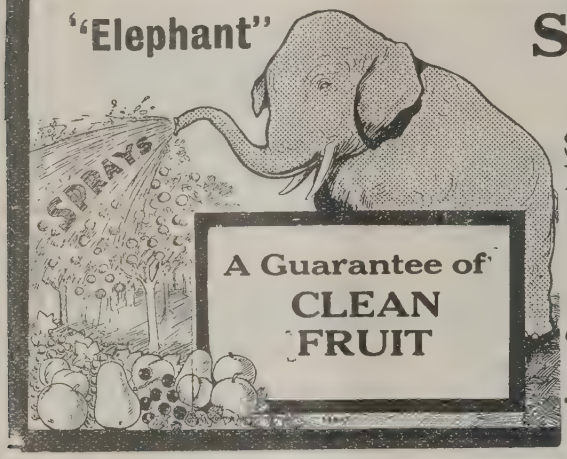
QUEENSLAND:—
Buzacotts' Queensland Limited, Brisbane.

WESTERN AUSTRALIA:—
Westralian Farmers' Union, 569 Wellington St., Perth.

TASMANIA:—
Charles Davis Ltd., 60 Elizabeth St., Hobart.

NEW ZEALAND:—
Harold Lightband Ltd., 79a Lichfield St., Christchurch.

THE ROOT HAND DUST GUN IS AN IDEAL MACHINE FOR THE APPLICATION OF CALCIUM CYANIDE OR CYANGAS.



STILL ON TOP!!

ORCHARDISTS

Spraying is essential and your best Insurance—Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand Sprays

ONLY

The Codlin Moth can be kept in check if careful attention is paid to spraying.

Experts say:—"Spray at regular intervals until three weeks before harvesting."

Note this and Use

"Elephant Brand" Arsenate of Lead

(Paste and Powder)

Other Elephant Brand Products

Bordeaux Mixture Powder - Bluestone - Lime Sulphur
Prepared Red Oil - Prepared Crude Oil

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of **Elephant Brand Sprays**

Manufacturing Chemists, MADDEN GROVE, BURNLEY, MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for February 1928

Illustrations.

Roadside Fruit Stall in California 55

Effect of High Water Table on Root Development of Citrus Trees 76

Effect of Drains on the Water Table 77

Subjects.

Apple Scald and Wilt in Cool Storage Fruit 67

Answers to Correspondents xvi.-xvii.

Californian Raisin Industry 59

Canning Fruits: Quality and Tree Production; Export of Canned Peaches; Leeton Cannery 63–64

Common Storage of Fruit .. 57

Commonwealth Research Station, M.I.A. 76–77

Cherry Ripe 73

Dried Fruits: Development and Migration Commission's Report; California Raisins; News and Notes 58–60

Export Notes, 1928 Season.. 72

Fruit Export Control .. .. xv.

Grapes for Export 62

Insect Pest Control 71–2

Markets: British and Australasian 80–82

Marketing Fruit Crops in U.S.A. 55–56

New South Wales: Fruitgrowers' Federation; News and Notes; Orchard Work 60, 74–75

New Zealand: Crop and District Reports; Orchard Work 65–66

Packing Apples in the Canadian Case 64

Poultry and Beekeeping.. .. 87–89

Personal 56

Prune Growers' Conference, N.S.W. 60

Queensland: Current News and Notes; Orchard Work 83–84

South Australia: Orchard Notes 57

Soil Management 79

Tasmania: Orchard Work; News and Notes; State Fruit Advisory Board.. .. 70–71

Victoria: Cool Stores Conference; Undersized Fruit Cases; News and Notes 60, 78–79, 84

Visit of Dr. Haden Guest .. xvii.

Western Australia: Annual Conference; Orchard Work; District Notes.. .. 61–62

INDEX TO ADVERTISERS.

Books, Publications— . ..

"Garden Lover," Bank House, Bank Place, Melbourne, p. xxi.

"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii.

Canning Machines—

Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. ix.

Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—

Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—

"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. xvi.

Dusting Machines—

Atomol Dusts Ltd., Dumphries Place, Adelaide, p. 51.

Fruit Buyers—

Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xix.

Fruit Tree Suppliers—

Brunning, John, and Sons, Somerville, p. 54.

C. A. Nobelius & Sons, Emerald, Vic., p. xxi.

Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), cover ii.

Two Bays Nurseries, Moorooduc, Vic., p. xxii.

Fruit Graders—

"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood (Vic.), p. 79.

Fruit Picking Bag—

The "Bay View," F. R. Mellor, 440 Elizabeth St., Melbourne, p. 88.

Irrigation Machinery—

Pope's Sprinkler and Irrigation Co., Robert St., Croydon Park, S.A., p. 88.

Irrigation Hose and Canvas Goods.—

Wyett Mfg. Co. Pty. Ltd., Geelong, Vic., p. 83.

Manures, Fertilisers, &c.—

Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. xvii.

Motor Cars and Trucks—

Ford Motor Co. of Aus. Pty. Ltd., all States, p. xi.

Brockway Trucks, Ronaldson Bros., & Tippett Pty. Ltd., 630a Bourke St., Melbourne, p. xviii.

Orchard Ploughs, Cultivators, &c.—

D. Harvey, Box Hill, Melbourne, p. 85.

Orchard Requisites—

McPherson's Pty. Ltd., 582 Collins St., Melbourne, Vic., p. xii.

Patent Attorney.—

Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. xvii.

Poultry—

Karswood Poultry Spice, Agents all States, p. 86.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—

Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xx.

Softwood Fruit Cases—

C. H. Tutton, 40 Queen St., Melbourne, p. 82.

Spray and Dusting Material—

"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. xiii.

"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.

"Elephant" Brand, Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. 52.

"Gargoyle' Spraying Oil, Vacuum Oil Co. Pty. Ltd., cover i.

"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.

"Clensel," Bruce Anderson, 56 Hardware St., Melbourne, p. 75.

Dusting Powders, Atomol Dusts Ltd., Dumphries Place, Adelaide, p. 51.

"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. iv.

Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. xxii.

"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 78.

"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 74.

Spray Pumps and Guns—

Alumino-Thermic and Metal Sprayers Ltd., 247 George St., Sydney, N.S.W., p. iv.

"Bave-U" Power Sprayer, Russell & Co., Box Hill, p. xv.

604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. xix.

Spray Pumps, etc., Cooper Pegler & Co. Ltd., 24d, Christopher St., London, E.C.2, p. 77.

Strawboard Liners for Cases—

J. Fielding & Co. Ltd., Chalmers St., Sydney, p. xii.

Strapping Fruit Cases—

Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.

"Griplock," Wire Strapping, Jas. Henty & Co., 499 Lit. Collins St., Melbourne, p. 51.

Stencilling Inks—

Caldwell's Pty. Ltd., Yarra Bank Rd., South Melbourne, p. 64.

Transport—

London and N. E. Railway, Burns, Philp & Co., agents, p. 40.

Tree and Stump Pullers—

Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix.

"Digger," Quick Manufacturing Co., 75 Pender St., Thornbury, p. xv.

FRUIT TREES for Propagation

Many lines are worked on contract to Orchardists, Wholesalers, and others.	Have you any particular line you wish propagated from your own particular trees?	Budding is carried out during January, February, and March, 1928, but trees budded will not be ready till winter 1929. Any quantity, any kind.

186 Acres Under Intense Cultivation.

CATALOGS, ETC. FOR 1928

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 61 YEARS

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices where copies and full particulars are obtainable) are as follows:—

HEAD OFFICE:

Bank House, Bank Place, Melbourne, Victoria

Representatives in all States and New Zealand.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

American Office: S. D. McFadden, Pacific Bldgs., Market Street, San Francisco, Cal., U.S.A.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

NOTES IN BRIEF.

As the season appears to be an early one in most States, growers will be pleased to learn that there is no embargo on February shipments of Apples. Exports, however, will be carefully inspected for immature fruit.

Notes on fruit picking and the indications of maturity in various fruits are given in our New Zealand section.

The storage of Apples in ordinary stores is dealt with in a brief article in this issue.

Mr. W. Ranger, Manager of the Committee of Direction of Fruit Marketing, Brisbane, has safely returned after his visit to the United States.

1927 APPLE PRODUCTION IN U.S.A. AND CANADA.

According to official reports it is estimated that the Apple crop for 1927 will be only 50 per cent. as large as that for last year. The total crop is estimated at 123,574,000 bushels, compared with 246,460,000 bushels produced in 1926.

The Canadian production is estimated as 8,162,400 bushels, as compared with 8,852,690 bushels in 1926, and 9,972,770 for a five year average.

Marketing Fruit Crops in U.S.A.

Growers, Trade and Public Co-operate.

Marketing of the Fruit Crop in the United States is on a Merchandise Basis, the Standard Grades Being Well Advertised.

The Auction System Applies in Large Cities, Private Treaty in Others. Open-air, Kerb, and Roadside Markets are Valuable Adjuncts.

(By R. E. Boardman.)

(Republished from Melbourne "Herald.")

AFTER having visited orchards and the co-operative organisations in the United States, it was of great interest to observe the method of marketing the crops.

Speaking broadly, there are the big wholesale markets centrally situated, having railway connections, where retailers may purchase their supplies. But there were many points I noted which I believe could be adopted with profit in Australia to the benefit of grower, distributor and consumer.

In places like Chicago (3,000,000 population), and New York (6,000,000 population), much of the fruit is sold by public auction, just as it is in London, Manchester, Liverpool and Hull. There are private treaty sales as well in all these cities. But for more ready comparison I will describe the methods in San Francisco (comparable with Melbourne), and Los Angeles (larger than Sydney).

In these, as in other markets, there are (a) representatives of the growers' organisations, and (b) officers from the office of the County Horticultural Commissioner.

The former co-operate with the merchants. Some organisations, as for instance the California Fruitgrowers' Exchange ("Sunkist" Oranges), and the Skookum Packers' Association (Apples), sell straight out through their representatives to the merchants. Other fruit comes in on consignment.

The growers' representative can settle points as they arise in the daily handling of a perishable commodity; he notes the quality of the packs as they arrive, and can send back independent reports to the grower, especially where soft fruit arrives in poor condition.

The County Horticultural Commissioner and his officers have to administer the standardisation laws, and they have power to seize fruit which does not come up to the standard grades.

The Federal Department of Agriculture renders notable service in two ways:—

(1) By providing a daily market news service, giving details of all the fruit placed on rails daily, the destinations, the quantities of fruit already at the various marketing points, and daily price returns. This is to assist in making marketing more scientific, and to prevent markets being glutted.

(2) Independent certificates are furnished on payment of a small fee, describing in detail, the quality, grade, and condition of the consignments arriving. This certificate forms the basis for the settlement of claims, and is accepted as prima facie evidence in any court.

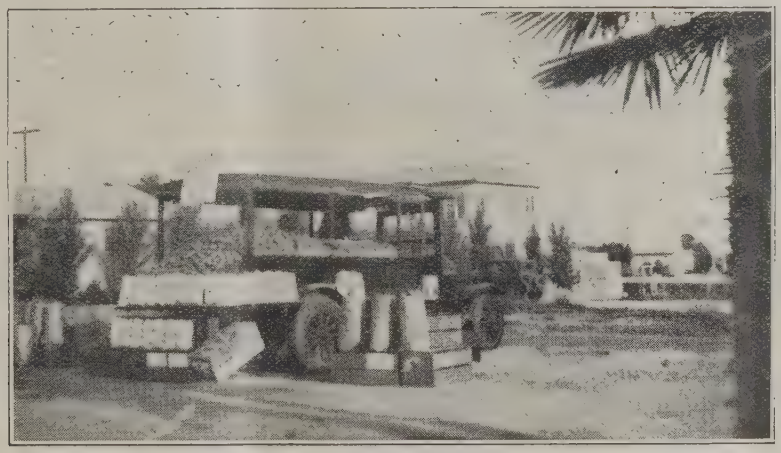
At San Francisco the markets are not municipally owned. The trade has grown up in a particular section, near to railway facilities, and the premises are either owned or leased by the traders.

Railway Into Market.

At Los Angeles the market is owned by a private company, being specially built for market purposes, the railway connections being exceptionally good. The railway waggons loaded with fruit and vegetables go right into the market, at the rear of the traders' warehouses or stalls; thus the produce can be unloaded from the trains into the exact position for display and sale, with only one handling.

Similarly for assembling and reloading for shipment outward from Los Angeles, only one handling is necessary, and the operations are speedy.

The railway gauge is the same throughout the United States and Canada. Thus a consignment of Apples could be loaded into railway waggons from the growers' siding, say, in British Columbia, and rolled 2,000 miles to Los Angeles, where it would be unloaded right into the salesman's store ready for inspection and sale; the only handlings being the loading in Canada and the unloading in the Los Angeles market.



A Roadside Fruit Stall in California.

I got up at 5 a.m. to see the markets operating at full speed. It was certainly an animated scene. Huge quantities of fruit and vegetables change hands.

A new law has just come into operation in California to compel commission agents to keep full records of every sale and to remit to growers the actual amount received, thus to prevent the averaging of consignment returns.

The buying trade is already large, and may increase still further; the new Act does not apply to the wholesale buyers or merchants, but only to the commission men. The commission charged in San Francisco is now 10 per cent., and it is thought that an increased rate will be charged to cover the extra bookkeeping involved. The County Horticultural Commissioners say that if growers want the names of reliable agents, a list is always available.

I noticed different brands of Oranges being offered for sale, and I also saw prominent advertisements of the "Sunkist" brand in the wholesale stores. I asked if ad-

vertising were effective, and was answered by a broad grin and the inevitable "Sure."

"This is a 'Sunkist' market," said a prominent merchant at San Francisco. "The well directed national advertising campaigns give 'Sunkist' Oranges a distinct advantage. We sell more 'Sunkist' and at a higher figure than equal quality in other brands. The public asks for 'Sunkist,' and the retailers simply have to buy them to fulfil the public demand."

I found that fruit agents and merchants without exception spoke well of the growers' organisations, and said it was a pleasure to work in harmony with them.

Minimum for Berries.

The California Berry Growers' Association has an excellent arrangement, by means of which the industry has been uplifted and stabilised. With Strawberries, for example, the Association fixed a market price below which the berries must not be sold.

The market price, however, is frequently higher than this fixed minimum. Because of a favorable agreement with the canners, this arrangement is possible. By 9 a.m. each day all market sales of Strawberries cease; buyers know they must get their supplies before then, or their opportunity for the day will be gone.

The growers' representative calls on each salesman and arranges for all unsold Strawberries to be delivered to the canneries at a price previously agreed on.

Fruit merchants told me that their arrangement with the Berry-growers' Association was a particularly happy one —the trade had been lifted to a higher level. The Association is financed by a small levy collected through the agents and canners.

Now, apart from these wholesale markets there are retail markets scattered throughout the cities. In San Francisco, along the principal thoroughfare, appropriately called Market-street, there are several—the Crystal Market, Spreckels Market, Grant Market, and others.

These are clean, well-lighted, airy buildings, privately owned, and the stallholders pay their rent in the ordinary way. They are open every day except Sunday, from 7.30 a.m. to 6 p.m., and to 11 p.m. on Saturdays.

Here the thrifty housewife may buy not only fruit, but meat, fish, groceries and every other kind of household necessity. The commodities offered are of good quality and reasonable in price, the stallholders believing in a small margin of profit and a large turnover, thus pleasing the public and having an assured and continuous trade.

So, instead of waiting for municipal councils to provide markets, private enterprise has stepped in and met the need.

Fruit is obtainable cheaply in the "chain stores" and the "Pigglywiggly"—cash-and-carry stores as we know them —and barrows are at the street corners.

There are no restrictions of hours during which fruit may be sold. This differs from the system which operates in the suburbs of Melbourne, where fruit cannot be sold after 7 p.m. for five months of the year. A fellow-Australian in Los Angeles said this restrictive regulation in Victoria was as disappointing to the public as it must be a loss to the growers.

Kerb Markets.

A regular feature of American cities and towns is the kerb market. In Vancouver, B.C., the kerb market is open every day. The stalls are fixed structures, and there is shelter against rain.

At Portland (Oregon) and Seattle (Washington) these daily open markets are on such an extensive scale as would surprise the good folk of Melbourne, who are advocating the extension of "open" or kerb market facilities.

Along the highways and in every town and village there are roadside stands for fruit.

The major aspect of this subject appears to be the organising of the growers according to the specific fruits they produce or according to locality. With sufficient finance through a small levy on the fruit sold, the services of capable men could be obtained for the organising and executive work.

Thus with the industry made articulate, and the working in harmony among producers and distributors, the active co-operation of Government Departments and the public would be secured.

Sympathy is expressed with Mr. Sampson, orchardist, of Mitcham, Victoria, who recently lost his wife in tragic circumstances.

Mr. J. Valantine, of Kalorama, is energetic in endeavouring to secure more adequate investigation into the "white root" fungus and thrip pests which are attacking the berry fruit industry in the Mt. Dandenong Ranges, Victoria.

Mr. R. E. Boardman, Editor of the "Fruit World," has returned to Melbourne after visiting Hawaii, U.S.A., Canada, and England. He is preparing a series of articles which will be published regularly each issue.

Two appreciated visitors at the Fruit World Office in January were Messrs. C. Roux and W. Roux, of South Africa, who were recently in U.S.A. and England. An interesting account of their impressions appears in this issue.

Mr. J. Stevens, of Blackburn, has been created a Justice of the Peace.

Mr. H. R. Paton, the able Secretary of the Mildura and District Grape Growers' Association, is actively engaged in organising the distribution of fresh grapes in the country districts.

The Ford Motor Company of Australia Pty. Ltd. advise that Mr. C. Pratt, who was formerly their Publicity officer, has severed his connection with the company.

A GHASTLY SUGGESTION.

A correspondent in South Australia, writes suggesting that scientists should experiment with the use of poison gases, such as were used on the battlefields, for the destruction of insect pests.

This method has been carried out for many years in the fumigation of citrus and other trees, particularly for scale insects. Hydrocyanic Acid gas is most generally employed. The fumes in this case are, of course, restricted by releasing the gases under tents. It has been found impossible to obtain a sufficient concentration of any gas in the open to effectively deal with insect pests. Experiments in this direction were tried last season during the Rutherglen Bug infestation in the Goulburn Valley, but without success. Any concentration of poison gas sufficient to destroy the insects would be likely to be harmful to the higher forms of life also.

CALIFORNIAN ORANGES.

Available in Australia.

Local supplies of citrus fruits are now getting short, the supply of Oranges on the Melbourne market having dropped from about 10,000 cases a week to 200 or 300. The deficiency is now being supplied by Californian fruit, which is being imported in increasing quantities.

The Vic. Railways Orange drinks stalls are still using Australian Oranges, having purchased 40,000 cases when the fruit was plentiful, most of which was held in cool store for summer use.

The past season has been one of the most successful experienced by citrus growers for some years.

As all work in connection with the migration is now being handled by the Development and Migration Commission, the Federal portfolio of Migration has been transferred to the Prime Minister's Department, and the former Department of Markets and Migration will, in future, be simply the Department of Markets The Hon. T. Paterson is the Minister for Markets.

SOUTH AUSTRALIA.

Orchard Notes for February.

Northern Districts.

Watering and Evaporation.

A GOOD WATERING given to late-ripening varieties of soft fruits, will considerably increase the bulk, and, where water is urgently needed by the trees, improve the quality of the fruit. In addition to old trees carrying large crops of fruit, young trees planted during the past season are most liable to suffer from lack of moisture, and, where possible, such trees should be thoroughly watered and the ground around the trees mulched by pulverising the surface soil often, while a mulch of straw or dry grass over the soil around the tree will be a further help in preventing evaporation. Trees which have been planted two years or more, but which have not commenced to bear, appear to be best able to withstand a spell of dry weather.

Dried Fruit Moth.

Currant-growers who intend to dry fruit this season in preference to selling it for distillation purposes will serve their own interests, as well as those of packer and consumer, if they sterilise all hessians and sweat boxes with boiling water to destroy the larvae of dried fruit moths before the drying of the new season's fruit is commenced. Small quantities of last year's dried fruit may be also sterilised by immersion in boiling water, after which it should be re-dried. All dried fruit refuse should be burned or buried.

Where currants are graded according to color before being dried, and the different colored types dried separately, the standard of quality of the bulk can be considerably improved. Picking should not commence until an average sample of the type which it is proposed to pick shows a high Beaume reading.

Where, on account of grafts having failed, or for other reasons, "Yema" budding is to be attempted in the vineyard, the operation should be carried out early this month.

A pear tree canker has made its appearance in the Northern District, but so far does not appear to be spreading rapidly. Infected limbs should be cut out during winter pruning, and destroyed by burning, after which tools used in the operation should be sterilised.

Prune rust and downy mildew are liable to appear after heavy summer rains and warm, moist weather. Both these diseases can be checked by the application of Bordeaux mixture.

Codlin Moth.—Spraying for Codlin Moth should be attended to. Infested fruit should be destroyed.

Southern Districts.

Harvesting will be the work of the month. The hot weather of January will have checked the growth of newly-planted vines and trees. Where possible, give a supply of water; make the trenches 12in. if possible, and give a good soaking. Fill in trenches at once, and run the cultivator over the soil before the surface hardens. Keep pip fruits covered with arsenate of lead to check Codlin Moth. Woolly aphis will need watching.

Scale insects on citrus increase quickly now, and should be attended to. Rutherglen Bug or Fly has been very bad, amongst vegetables particularly; it would be worth while to try calcium cyanide for this pest.

Keep the lower limbs of citrus off the ground, as a preventive of Brown Rot. Vines must be watched for fungus diseases and treated if necessary. Have trays and racks ready for grape drying. Use every care to have everything free from larvae of the fruit moth; especially have no left-overs from last season's produce. By C. H. Beaumont, Orchard Instructor and Inspector, in the "Journal of Agriculture," Feb., 1927.

COMMON STORAGE OF FRUIT.

TO COLD STORAGE, common storage is a valuable auxiliary, especially in the case of those Apples which are good keepers, and more especially in climates like Batlow and Orange, N.S.W. What are the chief factors involved in the successful storage of Apples? They are, as is well known to most growers, (1) the natural and inherent keeping quality of the fruit itself; (2) picking at the right stage in the development of the fruit; (3) care in picking; (4) promptness in cooling, and (5) suitable storage conditions.

As every observant grower knows, there is a great difference in the keeping qualities of varieties of Apples, and experience should be a guide to the period of time during which each variety may be advantageously kept in storage. Apples can, of course, be kept longer in cold than in common storage, but it must always be remembered that fruit does not always reach the consumer as soon as it is released from storage. Care in handling must again be insisted upon, for it is of paramount importance. Common rot organisms will almost of a certainty make their appearance and place havoc with the fruit if the skin is broken. Upon the unbroken skin more than upon any other single factor depends the keeping qualities of the fruit.

No definite rule can be laid down respecting

the maturity of fruits,

and therefore the grower must learn by observation and by experience. The color of the seed and the blush or color of the variety guide to some extent, but they are not absolutely dependable. The best guide is the ground color. Before the Apple is ripe the ground color is green. This gradually lightens and turns to a light yellow as maturity is reached, and not before this color stage is reached should the apples be placed in storage.

Over-ripeness

is a more serious defect than immaturity. The trees should be picked over several times, for the simple and obvious reason that the whole of the fruit of any given tree does not mature simultaneously. After the earlier pickings there will still be immature fruit on the tree, which will improve in size and in marketable quality if left. In respect to size, which is a very important consideration, it may be stated that, generally speaking, Apples ranging from 2¼ to 2¾ inches in diameter (roughly 6¾ to 8½ inches in circumference) will keep for longer periods than large Apples. This difference in keeping quality is due not so much to size in itself as to the fact that abnormal size is often due to the forcing that develops abnormal size, and to the immaturity which often accompanies it. At the same time it may be noted again that the rule is not invariable. Apples may develop a good size and keep well.

Very important factors governing satisfactory results in common storage are:—

1. Prompt cooling;
2. Maintenance of even temperature;
3. Amount of atmospheric humidity.

The foregoing pre-suppose that care in handling, so insistently dwelt upon, has been observed. If fruit is exposed to a high temperature for any length of time after picking it becomes over-ripe, and its keeping qualities are prejudicially affected. If fruit is picked in the heat of the sun and allowed to remain exposed to the sun's rays, it will not keep so long as when it is placed in the shade after picking.

So far as the storage house is concerned, it should be well ventilated and walls should be insulated. Fruit should be stocked in such a way as to secure free air circulation. A stagnant atmosphere is disastrous to the keeping qualities of fruit. Badly designed storage accommodation, badly utilised, instead of retarding, accelerates decay of fruit.—(By W. J. Allen & H. Broadfoot, in the "Agricultural Gazette.")

Dried Fruit Department

DRIED FRUITS INDUSTRY.

Report of the Development and Migration Commission.

World Production of Raisins 60,000 Tons Above Consumption.

THE REPORT of the Development and Migration Commission on its investigations into the dried fruits industry of Australia, which has now been presented to the Prime Minister, deals with such matters as production costs, packing and processing, marketing, finance, and legislative control. The world position of the industry has also been studied, and the report includes a statement showing that on the present figures, the world consumption of Raisins and Currants is more than 60,000 under the world production.

Due to the large increase in plantings during war years, Australia's production has increased to 55,000 tons in 1927. This makes it necessary to export approximately 80 per cent. of the total pack, whereas in 1912 imports of Currants and Raisins exceeded the exports. The United Kingdom is the largest purchaser in the world of dried vine fruits, and the report considers that Empire trade should be developed.

The Commission suggests that more efficient and more economical handling could be secured by one central organisation handling the pack through 12 packing sheds, in place of the 88 at present operating along the River Murray.

Production Costs.

It is indicated that under present conditions, as yield per acre is increased, production per ton is decreased. Costs taken from the growers' own records support the conclusion that yields of 25 cwt. or more per acre are profitable at present prices. The formation of a growers' co-operative organisation, with a view to controlling the whole of the packing, selling, and financial branches of the industry, is strongly recommended.

The Commission estimates that a saving of £2/10/- per ton would result from the concentration of packing and the elimination of agents. The practice of sending trained officers abroad to study the latest research work in other countries in the viticultural industry should be extended.

In view of the large proportion of Australian fruit to be exported, legislative control requiring all growers to export a pro rata proportion of their fruit is essential. With the development of one co-operative packing and selling organisation, it is expected that one board representative of the States and Commonwealth would probably be able to control the whole of the industry, both as regards the export trade and the Australian trade.

Principal Conclusions.

The principal conclusions of the Commission are that it is only by co-operative action on the part of the growers that the dried vine fruits industry can be placed upon an improved economic basis; that provided the average prices of the last three years are maintained and reasonable yields produced, the industry can be considered profitable; that increased yields to the acre provide the chief opportunity for reducing costs of production; one co-operative packing and selling organisation to control the whole of the River Murray pack (50,000 tons) would be able to effect savings of more than £4 a ton, made up of £2/10/- saved in packing and selling costs, £1/7/3 for improved grading, and 3/- saved in interest. This would be equivalent to more than £200,000 a year on a normal year's crop; anv improvements in organisation must come from within the industry itself; Great Britain is Australia's principal export market, and Australia is supplying an increasing proportion of the British requirements as a result of—(a) the preference of £7 a ton conceded on Australian Raisins; (b) the activities of the Australian trade publicity project jointly financed by the Commonwealth Ministry and by growers; (c) the work of the Empire Marketing Board; (d) the measure of control now possible under the Commonwealth Export Control Board legislation.

Recommendations.

The Commission makes the following recommendations:—(1) That Governments definitely discourage further plantings until additional markets are assured; (2) that a co-operative packing and selling organisation be established to undertake the handling of the pack between grower and merchant, and to control the whole of the packing on the Murray River areas, as set out in the report; (3) that a conference of the industry be called with a view to forming a Committee to bring into existence the proposed co-operative packing and selling organisation. Such Committee should be representative of the industry, and should include a representative of the Commonwealth Government, and of each of the State Governments concerned; (4) that the possibilities of establishing a branch of the new organisation in London should be fully explored; failing that, the number of agents should be considerably reduced; (5) that a conference be held between the Commonwealth Bank and the Committee to be appointed to arrange for financing and taking over where necessary existing packing sheds; (6) that before installing new plants and machinery the new organisation either send a qualified engineer to America for the purpose of obtaining knowledge of the most efficient methods of factory organisation and modern machinery, or bring an engineer with that knowledge from America to Australia; (7) that State Ministries enact legislation to enable State Boards to deregister packing sheds.

The Commission also recommends that the Comomnwealth Ministry, which is deeply involved with the Ministries of New South Wales, Victoria, and South Australia in the finances of the irrigation settlements, should call a conference of the irrigation Commissioners of the States, the Department of Markets, the Development and Migration Commission, and others to report and recom-

mond with regard to a national policy for the future development generally of the irrigation areas on the River Murray and its tributaries. The supply of water for irrigation, including the efficiency of pumping plants, is being inquired into, and will form the subject of a separate report.

CALIFORNIAN RAISIN INDUSTRY.

Report by Mr. H. D. Howie, Chairman, A.D.F.A.

MR. H. D. HOWIE, of Renmark, S.A., Chairman of the Board of Management of the Australian Dried Fruits Association, has recently returned from a visit to California, where he studied the conditions of the dried fruits industry. A summary of his conclusions, as published in the "Murray Pioneer" of December 30, is as follows:—

The low selling prices of Californian Raisins has occasioned a great deal of surmise as to methods of production and selling. The following information relative to this industry was obtained during my stay in Fresno, California.

Not Paying the Grower.

Raisin production has not generally paid the grower for the past six years. The only varieties of Grape that have been profitable during this period, have been those used for wine making.

Each succeeding year since 1923 has seen many growers forced to relinquish their vineyards. Sales of properties are rare, and vineyards costing over £200 per acre can now be purchased from £50 to £75 per acre.

The opinion is held in many quarters that the only relief from the present conditions is a reduction in the acreage under vines. Efforts are also being directed towards increasing the yield per acre to lessen costs of production. The yield per acre ranges from three quarter ton of Raisins to 3½ tons, and 1½ tons is considered the average.

A Price War.

The present extremely low selling price of Raisins is due to over-production and lack of selling organisation. The "Sun Maid" organisation and independent packers are competing a price war on both the home and foreign markets. "Sun Maid" represented approximately 85 per cent. of the growers in 1923, but this season it is anticipated that this Association will not handle more than 45 to 55 per cent. of the output.

Costs of Production.

On the figures of 1926, the "Sun Maid" return of 2.85 cents per lb., or 57 dollars per ton, would only return costs of production on a yield of 1¾ tons per acre.

Compared With Australia.

Some of the points noted in favor of Californian conditions compared with Australian are:—

1. Higher average yield per acre.
2. Lesser cost for irrigation water.
3. Lesser cost for cultivation, harvesting and packing.

And those in favor of Australia are:—

1. Higher quality of product, giving a decided market preference.
2. Better marketing organisation.

In justification of this comparison, I proffer the following observations:—

Good Drainage.

The highest yields obtained in California are from deep alluvial soils provided with a good natural drainage. The exceptional depth of the soil combined with free drainage, permits of frequent application of irrigation water without risk of waterlogging. The soil is generally free from alkali and salt trouble is rare. Many properties possess their own pumping plants and supplement the general irrigation supply from wells on the spot, a plentiful supply of fresh water being obtained at depths of from 25 feet. It is interesting to note that the large town of Fresno (70,000 inhabitants) obtains its entire domestic supply of water from this source.

Cultivation Costs.

The standard of cultivation in California is not higher than that practised in Australia; in fact a number of growers are dispensing with summer cultivation altogether and depending on a plentiful supply of water to produce their crops. The bulk of the irrigation water supply is obtained from gravitation schemes and the cost in some cases is as low as 2 dollars per acre to the grower (this applies particularly to the Fresno district) for possibly six to seven irrigations. Cultivation operations are principally carried on by means of tractors and implements specially designed for their needs, the cost of fuel is low, and comparatively large areas are worked by single units. Where horses are used, the fodder in the form of lucerne is always grown on the property.

Harvesting and Packing.

Harvesting costs are low, as little labor is employed in processing. 20 dollars per ton is considered a usual cost of picking, turning, rolling and delivering "naturals." In the case of "soda and sulphur" bleached, harvesting cost is increased from 40 per cent to 50 per cent.

The concentration of packing operations into large central houses allows of a minimum of overhead costs, and ample storage provides for an extended packing season. The cost of timber for box-making purposes is low (9 dollars 65 cents per 100) and cartons in some instances are purchased for 4 dollars 75 cents per 1,000. The actual cost of packing in bulk in 25 lb. boxes seems to be from 13½ dollars to 15 dollars per ton.

Superior Australian Sultanas.

The better quality of the Australian Sultana may be accounted for firstly by superior natural quality of the Grape, and secondly by the greater care taken in preserving these qualities. The large crops taken from the Californian vineyards may possibly explain the very frequent poorness of product.

Conclusion.

In conclusion, the chief efforts of growers in California are now being directed towards two things:—

1. Lessening of cost.
2. Improvement of quality.

The first objective is sought by an endeavor to increase yields per acre by manurial and pruning practice; and in cases where holdings are too small, to concentrate into economic working units. The cheapest application of manure to the land is thought by many to be by the means of green cover crops; damaged lucerne straw is also popular.

There is a school of growers that claims success in increasing yields by extending the bearing area of the vine, that is to say by leaving an ample supply of canes and combining with this practice heavier manuring, watering, and a system of pinching back all unnecessary growths during the summer.

The effort for improved quality is being made mostly by those growers who produce the soda and sulphur bleached fruits. A distinct advance has been made in sulphur bleached in following up the sulphur process by artificial drying (dehydration). This practice has proved to considerably lessen the ill effects of sulphur and to improve the appearance.

In Australia the grower has for many years obtained a payable price from his home trade, despite the large exportable surplus. This is not so with California, which has a wealthy home market of over 100,000,000 people, but at present is selling their Raisins in this protected area at prices that cannot be expected to return cost of production to the grower.

SOUTH AFRICAN VISITORS.

Dried Fruits Investigations.

TWO INTERESTING VISITORS who called at the "Fruit World" offices recently were Mr. C. Roux (of South Africa) and his brother, Mr. W. Roux. They have just arrived from California, where they spent several months, particularly in Fresno, studying the dried fruits industry. Mr. C. Roux is a member of the staff of the South African Dried Fruits Association, and will shortly be returning to South Africa.

The South African production of Raisins and Currants increased from 3,237 short tons in 1923 to 6,000 tons in 1926. The vineyards are about 100 miles from Cape Town. Of the local tonnage produced, the South African Dried Fruits Association last season handled 1200 tons of raisins, 800 tons peaches, and 1,000 tons of dried apricots. An extension of the industry is contemplated. Amongst other things, the labour costs are very low, wages both in the packing houses and on the farms averaging 2/6 a day. Peaches, figs, and apricots are also dried; the quality of the last-mentioned is said to be excellent. The Royal is the apricot variety particularly in favour, having superior flavour, and good colour, and a demand for the product has been created in English markets.

When in England Mr. Roux noted the high quality of the Australian sultanas and the appreciation of the trade for them. Enquiries in the trade, however, reveal that there is room for improvement in the standardisation. The use of both cold and hot dips makes a difference in the colour of the fruit. The rich golden colour is appreciated, but if fruit of this kind is mixed with darker berries, the grade is lowered.

The visitors speak well of the Australian-made Brockhouse machine for stemming and grading dried vine fruits. There is also a Re-cleaning Machine used in Fresno, California, which is highly thought of. The fruit is washed and the caps removed. Sulphur-bleached sultanas from South Africa so far contain over the maximum of .075 sulphur dioxide allowed in Britain. Fruit containing this percentage cannot enter England.

Mr. Roux noted the difficult times through which Californian raisin growers were passing, principally caused by over-production, and appreciated the efforts of the Sun-Maid Association to serve the growers. The machinery at the Sun-Maid plants was up-to-date and effective; the advertising campaigns also had largely increased consumption. Messrs. Roux also spoke appreciatively of the system of horticultural commissioners and farm advisers now operating in California.

South Africa is largely developing as a fruit-producing country, with wide variations of soil, climate, and altitude. Most kinds of deciduous and citrus fruits can be grown, the principal market for the produce being Great Britain. It has been stated that in the future South Africa will be sending increasing supplies to the English markets, growers there having low production costs, a shorter journey to London, and less freight than is involved in shipping produce from Australia.

South Africa is now producing considerable quantities of wine, also a grape syrup product known as "Moskomfyt," obtained by boiling the grapes. This grape syrup does not ferment. It is bottled and eaten with bread, and served in other ways. Large quantities of this product are being exported to England and elsewhere.

After their arrival from California the Roux brothers visited Leeton and Griffith, in the Murrumbidgee Irrigation Areas of New South Wales, also Shepparton and other Goulburn Valley districts in Victoria. Mr. C. Roux has visited Mildura and the irrigated fruit districts of the Murray Valley, also the Hills district around Adelaide. His brother is staying in Victoria through the coming apple season, to investigate the apple-producing industry in Australia.

Mr. C. Roux is investigating the system of dipping fruit in Australia, and the effect of the cold and hot dips.

N.S.W. PRUNE GROWERS' CONFERENCE.

THE Fifth Annual Conference of the Prune Growers' Association of New South Wales, held at Young during December, was well attended. In submitting the annual report, the President (Mr. J. M. Dixon, Koorowatha), stated that up to the present the main activities of the Association had been in the direction of regulating and steadying the selling market for Prunes in N.S.W. by fixing a minimum price to wholesalers and retailers for various varieties, grades and qualities. At the present time prices were largely determined by the price at which American Prunes could be placed on our market; it was desirable that practically all Prunes grown in Australia should be consumed within Australia.

Other matters dealt with were the varieties of Prunes recognised by the Association, grades, standard sizes and shapes of boxes, and the appointment of authorised selling agents. Growers were advised to market through these agents, but there was no compulsion. Co-operative societies could be appointed selling agents. The Association was not a marketing agency, and its aim was to encourage all members to place on the market the best possible article.

Considerable discussion took place in regard to prices and the effect of importations from America. The Executive stated that it would be necessary to reduce prices for the coming season to meet this competition; increased duty had also been asked for.

Agents stated that there had been no trouble in disposing of Prunes during the past season. The N.S.W. Prune was of better quality than the American, but the lower price of the latter was an inducement to some merchants.

Other matters of importance discussed included grading, the adoption of a registered brand, and the question of some form of guarantee being given to merchants. The following office-bearers were elected:—President, J. M. Dixon, Koorawatha; Executive, J. Thompson, Griffith; J. L. Norrie, Koorawatha; L. R. Brown, Yanco; E. O. Catts, Miamuru; P. C. Cox, Griffith; H. Taylor, Waterview.

Victoria

CASTLEMAINE DISTRICT SHOW.

The Autumn Show of the Castlemaine District Horticultural Society will be held on April 11, and will be opened by His Excellency the Governor, Lord Somers. A fine display of fruit is expected.

A District Collection of Apples is one of the competitions. The competition is open to Associations or to individual growers.

There is also a Challenge Cup for this competition, presented by James Lang, Esq., J.P., to be won three times, not necessarily consecutively.

Western Australia

Annual Conference. Orchard Work. District Notes

W.A. FRUITGROWERS' ASSOCIATION.

Annual Conference at Bridgetown.

THE ANNUAL CONFERENCE of the W.A. Fruitgrowers' Association was held at Bridgetown on Tuesday, December 6, 1927.

The Rev. F. Davis welcomed the visitors and delegates and called on the President, Mr. J. Martin, to open the Conference. Mr. J. Martin also gave an address on the year's working.

Mr. G. L. Sutton, Director of Agriculture, and Mr. R. S. Sampson, M.L.A., then addressed the Conference.

The Secretary's financial statement showed a credit balance of £27/10/2. The statement and balance sheet were adopted.

The Secretary gave a report on the result of the resolutions passed at the last Conference, and also work done during the year.

Mr. Simper proposed and Mr. Ramage seconded, "That the Minister for Customs be asked to allow a drawback on all imported goods used for the export of fruit."—Carried.

Mr. Booth proposed and Mr. Simper seconded, "That in order to keep up the standard of fruit shipped to the Eastern States to the level of that overseas, the Government be asked to inspect fruit leaving the State."

It was decided to send delegates to the meeting of the fruitgrowers in Perth, called by the Market Trust, Messrs. Willmott, Booth, Ramage, Simper and Martin to act as delegates.

After the adjournment for lunch, the Chairman, Mr. Martin, welcomed Mr. E. Rose, M.L.C., and Mr. J. H. Smith, M.L.A., and both gentlemen addressed the Conference.

Mr. L. L. Hill proposed, and Mr. T. G. Sounness seconded, "That the Conference express the importance of the continuance of the railway construction policy linking the South-west district with the Port of Albany."—Carried.

Mr. L. L. Hill proposed and Mr. Willmott seconded, "That consideration should be given to the practicability of retailing Apples, especially those over 2¾ inches, by number instead of by pound, which would counteract the aversion of the retailer to the large Apple, retarding its sale to the detriment of the grower."—Carried. It was further decided that Mr. H. Harper, in conjunction with the Agricultural Department, should interview members of the trade with regard to the previous resolution and report to the Executive.

Mr. Hill proposed and Mr. Willmott seconded, "That the Association should urge the Board, advising on Group Settlement to stress the advisability of planting orchards in suitable localities, and the Agricultural Bank Trustees be asked to make advances against orchard propositions."—Carried.

Proposed by Mr. Hill and seconded by Mr. Sounness, "That the attention of saw mills be directed to the unsatisfactory wiring of shooks."—Carried.

It was decided to send to Mr. J. W. Bailey, of Victoria, our proportion of the £21 expended in distributing pamphlets of the Prime Minister's manifesto with reference to the Overseas Marketing Act.

It was decided to instruct the incoming Executive to use their best endeavor to get the Local Organisation Board Bill passed through Parliament within the next 12 months.

It was resolved to hold the next Conference in Albany.

The election of officers for the ensuing year then took place, which resulted as follows:—President, Rev. F. Davis; Vice-President, Mr. T. G. Sounness; Secretary, Mr. W. C. Cansdale, Bridgetown. Bridgetown representatives of the Executive, Messrs. Ozanne, Willmott and Hill. Mt. Barker representatives, Messrs. Martin and Skinner. Manjimup representative, Mr. R. H. Edwards. Mr. Hill, of Albany, was elected to the remaining seat on the Executive.

Mr. Martin proposed a vote of thanks to the Members of Parliament and the Agricultural Department for their attendance, which was carried with acclamation.

The Rev. F. Davis proposed a vote of thanks to the President, Mr. T. Martin, the Secretary, Mr. A. T. Booth, and the Executive, for the work done during the past season.

Messrs. Martin and Booth responded. The Chairman then declared the Conference closed.

On Wednesday, December 7, the Bridgetown Association conveyed the delegates to the Manjimup Annual Show.

The headquarters of the Association for the ensuing year is at Bridgetown.

LOWER CHITTERING NOTES.

Since writing my last notes another year has passed away. May the future prove prosperous and a season of plenty for all.

As I write, a much-needed rain is threatening, and the owners of the older groves who do not irrigate will be casting anxious eyes to the heavens and wondering whether the clouds will burst or blow over.

Oranges are now a thing of the past for this season, and growers report a fair average crop with a very firm market for the later varieties. Some growers have realised up to 24/9 for first-grade fruit. No doubt the orange drinks mentioned in my last notes have had an effect on the market, and have helped to make the demand more stable than has been the case in previous years.

Groves are, generally speaking, looking in good trim, and cultivation is the order of the day. A good rain would help the trees to carry over the dry months now ahead of us, but that is in the lap of the gods. Growers who fumigate are inspecting tents and plants, and preparing for the everlasting battle with the various pests that orange groves are heir to.

Summer Lemons also keep us busy, and the crop appears to be a very fair one.

Irrigation is the secret of a summer crop of Lemons, when the demand for the fruit is at its best and, moreover, it has the effect of making the main or winter crop ripen much later, so that the period of holding the crop for firm markets is much less. While the factories provide an outlet for the winter crop, the price is not very attractive, and growers who can store Lemons in winter till the market hardens find it a paying proposition, apart from the fact that a cured Lemon is a better marketable product than a fresh Lemon.—"Surtic," January 6, 1928.

W.A. DRIED FRUITS BOARD.

The first annual election of five members of the Western Australian Dried Fruits Board, held in December, resulted as follows:—Messrs. A. D. Doig, F. W. Davis, J. N. Cox, P. H. Taylor, and G. E. Cook. With the exception of Mr. Taylor, the successful candidates were all members of the first board appointed by the Government.

Western Australia

Seasonable Cultural Hints

(By Geo. W. Wickens, Superintendent of Horticulture, in the "Journal of Agriculture," W.A.).

THOUGH this is a month when fruitgrowers, particularly those who own orchards comprised of stone fruits, will be mainly engaged in marketing the crop, time must be found to combat the pests which take toll of the results of the orchardists' labours.

Fruit Fly is the worst enemy in this connection, so far as Western Australia is concerned, and there is evidence from the early start which it has made this season, and the good crop available, that special care must be taken by growers to keep the pest under control, or the losses will be heavy. There is no sudden death method of accomplishing this—nothing but constant vigilance and attention to detail will serve the purpose. Daily gathering up of windfalls, daily destruction by boiling of all infested fruits, foliage baiting, and trapping must all be carried out before control can be attained, and the grower in the infested area who neglects to take these necessary measures not only suffers loss in his own orchard, but is a menace to his neighbours as well.

Opportunity is again taken in these notes to remind Apple and Pear growers that **Codlin Moth** was present last season in two districts in the State—Collie and Narrogin—and though excellent results were obtained in the war waged against it, and its eradication in those places is confidentally anticipated, the fact must be borne in mind that just as it gained entrance there so it may to any other fruitgrowing portion of the State, and every grower should carefully note any suspicious tunnellings in his fruits, and notify the Department at once. Its presence in fallen Apples or Pears will be easily detected this month, and it is only by the wholehearted co-operation of growers and officers of the Department, such as has obtained in past outbreaks that the pest can be subdued.

Powdery Mildew is showing up in many Apple orchards, and should be treated by spraying with atomic sulphur. Where **Red Mite** is also prevalent a nicotine decoction can be added to the atomic sulphur spray.

Red Scale on Citrus trees has been held in control for several seasons by the parasite—Aphelinus diaspidis—but last season it was noticed that the pest was more prevalent in some districts in the hills near Perth than it had been during the three previous seasons. Should it show sufficiently during this month to endanger the fruit being spotted, spraying must be resorted to, but the increase of the pest is nearly always closely followed up by an increase of the parasite, and some infested trees should be left unsprayed so as to provide breeding places for the little friends of the fruitgrowers.

The soil in all orchards should be kept in a thorough state of tilth during this month by scarifying and/or harrowing.

MARGETSON & CO. LTD.

Fruit Importers & Salesmen

30 James St. and James St. Warehouses,

11 Neal St.,

COVENT GARDEN LONDON, W.C.

and at Jamaica House,

9 & 10 Botolph Lane, London, E.C. & 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.

Prompt Returns & Settlements

Tel. Add.—FRUTERO, LONDON. MARGETSON, LIVERPOOL

Head Office—Covent Garden Market, London, W.C.

Bankers: LLOYD'S BANK LIMITED Law Courts Branch, Strand, London, W.C.

Shipping Nos. 431 and 432

EXPORTABLE GRAPES

Storage Success with Ohanez Variety. Kept for Six Months.

OHANEZ GRAPES grown by Messrs. F. Parker, at Lemnos, Vic., and N. McPherson, Shepparton, kept in perfect condition for six months according to a report by Mr. Basil Krone, fruit packing expert of the Victorian Department of Agriculture.

After five months in the Victoria Dock Cool Store the Grapes packed in sterilised granulated cork commenced to show waste, while those packed in sulphite tissue paper and wood-wool remained perfectly fresh. After being exhibited in several places the last of them were displayed at the Shepparton Show on October 25, seven months after picking.

Hints Worth Noting.

Grapes may be kept fresh in granulated cork, but they will retain a better appearance and keep longer if packed in tissue-paper and wood-wool.

Cost of packing material:—Granulated cork, 1/– per box; tissue paper and wood-wool, 1½d. per box.

Pack only when the bunches are dry. See that the centres of the bunches are thoroughly dry after the morning dew before picking.

With grapes intended for export, none should be included on which rain has fallen or to which an artificial watering has been given within a week of harvesting.

Handle bunches by the stalks to preserve the "bloom" and to avoid damage at the pedicels.

Trim carefully all inferior and unmarketable berries from the bunches before packing.

Pack tightly; the security of the pack lies in its "snugness." Slack packing means damaged fruit.

After packing, despatch without delay for cool storage. Quick cooling of the fruit counts considerably in the length of time it will keep.

Cool-store at a temperature of 32-33 degrees.

HAMBURG (GERMANY).

Ph. Astheimer And Sohn,

Fruit Brokers . . and Auctioneers

(GERMANY) Established 1863.

Largest receivers of Australian, Tasmanian, and American APPLES.

Foreign Apples a Speciality.

Canning Fruit Notes.

HORTICULTURAL PROBLEMS NEEDING INVESTIGATION.

Quality and Greater Tree Production of Canning Fruits.

AT THE Science Congress, held in Hobart during January, the Victorian Superintendent of Horticulture (Mr. J. M. Ward), read an interesting paper dealing with Some Problems in Horticulture which need investigation. "Although the area under fruit in Australia," he stated, "is some 273,845 acres, and the annual value approximately £18,000,000, very little scientific investigation of the problems facing the fruitgrowers has been made."

Among the problems dealt with, all of which need early attention, were the following:—(1) Fruit tree stocks: (2) Manuring of fruit trees; (3) Quality and greater tree production of canning fruits; (4) Productivity of individual trees; (5) Pollination; (6) Water requirements of fruits grown under irrigation.

The section dealing with canning fruits is printed hereunder, and other items will be published from time to time. It is hoped that some of these problems will be investigated—as far as Victoria is concerned—at the new Goulburn Valley Research Orchard which is to be established at Shepparton. Mr. Ward said:—

Quality and Greater Tree Production of Canning Fruits.

In this respect, I desire to confine myself to two fruits, i.e., Peaches and Apricots.

Peaches.—As is well known, the chief peach produced in Australia for canning purposes is "Pullar's," a variety raised in the Goulburn Valley. This Peach has become popular on account of it being a reliable cropper. It is a late peach, and is canned during the latter part of March and in April. Whilst this variety is an excellent canner, it has a very large stone; it also lacks the deep golden color in a canned peach that meets public favor. An attempt should be made at evolving a peach with a small stone, but equal in flesh to Pullar's by crossing Pullar's with a small stoned variety. In the same way an attempt should be made to eliminate the red flesh round the stone.

The result of such a cross, on the basis of Mendelism, would be as follows:—In the first generation dominant characters will show up; and if small stones are dominant to large stones, then the crossbred will possess a small stone. If good flesh is also dominant, we shall have possibly secured the new Peach we are now seeking.

Another matter to be considered is the production of varieties that mature at intervals to suit the working of the canneries, and thus prolong the canning season. At the present time there is a slack season of some three weeks between the treatment of the last Apricots and the first Peaches, and it is this interval that we desire to overcome by breeding either a later maturing Apricot or an early maturing Peach suitable for canning.

We have a number of really good mid-season Peaches so far as the quality of the fruit is concerned. I refer to such varieties as Golden Queen, Levis Cling, Nicholl's Cling, Lemon Cling, Orange Cling, and Sim's. Unfortunately, these Peaches do not produce sufficient crop to make them a payable proposition, and therefore growers prefer to grow Pullar's. However, this does not suit the canneries, as it is necessary for them to have a continuous supply of fruit throughout the canning season rather than a heavy supply of one variety over a short season.

Investigation is required with a view to either breeding suitable mid-season varieties that will produce heavy crops, or discovering the cause of the comparatively low yield of the kinds referred to. In some instances there is a decided "drop" of flower buds during late winter, and this is responsible for the low yields of certain varieties. The cause of this "drop" requires investigating.

Apricots.—The principal variety of Apricot produced in the Goulburn Valley is "Moorpark." This is most unsatisfactory as regards yield.

Another serious drawback to this variety as a canning Apricot is its uneven ripening, that is, one-half, or a portion of the fruit may be ripe, whilst the remainder is quite green.

The Moorpark variety apparently is not a satisfactory Apricot to grow in a hot climate.

Other varieties that are grown for canning purposes are Shipley's (also known as Blenheim), Royal, Hemskirke, Tilton and Trevatt. The last-named is an Australian raised Apricot, and so far this variety promises to be the most satisfactory Apricot for both canning and drying purposes.

Here, again, however, we have need of an improved Apricot that will can and crop to the satisfaction of all concerned.

I confine myself to canning varieties of Peaches and Apricots, because these, together with Pears and Pineapples, are the principal fruits that are canned, and the canning industry of Australia is becoming more important each year. The production of these fruits has had, and will continue to have, a very important bearing upon the development of the irrigable areas of Australia, particularly in those States bordering the Murray River. The canning of Pears and Pineapples does not at present require the same urgent attention as Peaches and Apricots.

EXPORT OF CANNED PEACHES.

Subsidy of 1/6 per Doz. Approved.

The crops of canning fruits are particularly heavy this season, and it is expected that large quantities will be available for export. In a statement made after a meeting of the Federal Cabinet on January 18, the Prime Minister (Mr. Bruce) said that competition in the United Kingdom with Californian canners was still very acute. In respect to Peaches, London prices were to-day 2/- a dozen below the cost of production in Australia. The matter had been very carefully considered by the Canned Fruits Export Control Board, the Commonwealth Board of Trade, and the Department of Markets, which had recommended that financial assistance should be given by the Commonwealth to enable Australia to place its canned fruits on the British market again this year.

The Ministry, added Mr. Bruce, had therefore approved the recommendation, and decided that a subsidy not exceeding 1/6 a dozen 30oz. tins should be paid out of the primary production trust account on canned Peaches of the 1927-28 pack exported to Great Britain. Among the conditions attached to the payment of the subsidy were the following:—

"That the cannery applying for assistance has exported to Great Britain such quantities of canned Peaches, Apricots, and Pears of the 1927-28 pack as may be determined by the Minister for Markets; that the Department of Markets is satisfied that the best price has been obtained for the fruit; that not less than £10 a ton is paid by canners at orchard or at growers' sending station for all the Apricots, Clingstone Peaches, and Pears purchased for canning; that the Minister for Markets is satisfied that the cannery applying for assistance has done all in its power to purchase from growers at the prescribed prices Apricots, Clingstone Peaches and Pears in such quantities as it is

practicable for the cannery to process."

It has also been decided by the Ministry that any future application for financial assistance to the canned fruits industry shall be considered in conjunction with the report by the Development and Migration Commission on the canned fruits industry, which it was now investigating.

LEETON CANNERY.

The Apricot season terminated at the end of the year, the fruit on the whole being of very fine quality, and a first-class pack will result. Approximately 600 tons were treated, which is equal to last season's tonnage. The largest pack in one day during this season was 90,000 cans. A high percentage of the fruit has been passed by the Federal authorities as suitable for export.

The Peach season will open in February, and the crop holds out every promise of being heavy.

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT, London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

Brand Your Fruit Cases and Bags
with
CALDWELL'S STENCILLING INK
(In Cakes and Liquid)
QUALITY UNSURPASSED
Obtainable All Merchants
Local Agents Wanted
CALDWELL'S PTY. LTD.
Yarra Bank Road
South Melbourne, Vic.

Three tons of special steel is used daily in the manufacture of gears by the Ford Motor Company of Canada Limited.

Packing Apples in the Canadian Case.

IN VIEW of the approach of the Apple export season, we have been asked to describe the method of packing Apples in the Canadian bushel case, and the following information has been kindly supplied by Mr. Basil Krone, Fruit Packing Expert, Victorian Department of Agriculture, who writes:—

"The packs are similar to those adopted in America, but for our packers' information I have included the size of the fruit, also the number of layers in each case. This information will assist in ascertaining which size to adopt for any particular count. The table has been thoroughly worked out, and growers should not encounter any difficulty in adopting any of the packs."

The following information, together with illustrations, is being incorporated in a wall chart illustrating the correct method of packing Apples in the Canadian case, which is now being prepared by the Department; a bulletin dealing with the packing of Pears and other fruits is also being prepared. Further extracts and illustrations will be published later.

Department of Agriculture, Victoria

Horticultural Division.

Fruit Packing Instruction Branch.

Apple Chart for the "Canadian Standard" Bushel Case. Inside Measurement 18 x 11½ x 10½ in.

Note.—Apples of similar size may be packed in various ways, according to their shape, whether "long," "flat," or "medium-shaped."

Important.—Packing fruit to the "Correct Height" in the case (about 2in. at centre of bulge) and the "Snugness" of the specimens in each layer are the important features for its safe carriage over long distances.

The second and alternate layers in each case must not rest directly on top of the fruit beneath, but in the spaces. In other words, "No two fruits should rest directly on top of each other in any direction."

The fruit must be packed on their "cheeks."

Remember.—It is the size of the "pockets" or "spaces" between the fruit that controls its height in the case, therefore some sizes must be packed tighter or looser than usual to control this.

Size of Fruit.	Style of Pack.	Description of Layer.	Number of Layers	Total.	Remarks.
2⅛ inch	3-3	8 x 8	5	240	
,, ,,	3-3	7 x 6	6	234	Pack tighter than usual.
2¼ ,,	3-3	8 x 7	5	225	
,, ,,	3-2	9 x 9	5	225	
,, ,,	3-2	9 x 8	5	213	
,, ,,	3-3	7 x 7	5	210	
,, ,,	3-3	6 x 6	6	216	
2⅜ ,,	3-2	8 x 8	5	200	Pack tighter than usual.
,, ,,	3-3	6 x 5	6	198	Pack looser than usual.
,, ,,	3-3	7 x 6	5	195	
,, ,,	3-2	8 x 7	5	188	Pack tighter than usual.
2½ ,,	3-3	6 x 6	5	180	
,, ,,	3-2	7 x 7	5	175	
,, ,,	3-3	6 x 5	5	165	
,, ,,	3-2	7 x 6	5	163	
2⅝ ,,	3-3	5 x 5	5	150	
,, ,,	3-2	6 x 6	5	150	
,, ,,	3-2	7 x 7	4	140	
,, ,,	3-2	6 x 5	5	138	
2¾ ,,	3-2	7 x 6	4	130	
,, ,,	3-2	5 x 5	5	125	
,, ,,	3-2	6 x 6	4	120	
2⅞ ,,	3-2	5 x 4	5	113	Pack looser than usual.
,, ,,	3-2	6 x 5	4	110	
3 ,,	2-2	7 x 6	4	104	Pack tighter than usual.
,, ,,	3-2	5 x 5	4	100	Pack looser than usual.
3⅛ ,,	2-2	6 x 6	4	96	Pack tighter than usual.
3¼ ,,	3-2	5 x 4	4	90	
,, ,,	2-2	6 x 5	4	88	
3⅜ ,,	2-2	5 x 5	4	80	
3½ ,,	2-2	5 x 4	4	72	
3⅝ ,,	2-2	4 x 4	4	64	

New Zealand.

Crop and District Report. Orchard Work.

NEW ZEALAND FRUIT CROPS.

The Director of the Horticulture Division has received the following reports from his officers regarding orchard and marketing conditions at the end of December, 1927.

Auckland.—Apples: Carrying very good crops. **Pears:** W.B.C. rather heavier than usual. Keiffer and P. Barry somewhat light; other varieties average. **Peaches and Nectarines:** Rather light, except Paragon, which are well up to average. **Plums:** Medium to light crop only. **Oranges and Lemons:** Setting a full crop.

A particularly dry spell is being experienced, and fruits of all kinds are backward as a consequence.

Hawkes Bay.—Apples: Good even crop throughout; fruit should be of good size. **Apricots.—**Below average. **Nectarines:** Average. **Peaches:** Early sorts have been light; others average to heavy. **Pears:** Below average. Coles and W.B.C. rather patchy. **Plums:** Average. **Plums (Japanese):** Heavy.

Wanganui. — Apples, Apricots, Lemons and Pears: Average. **Nectarines, Oranges, Peaches, Raspberries, Strawberries and Walnuts:** Short crop. **Plums:** Short crop. **Plums (Japanese):** Average.

Unseasonable weather conditions prevailed during the early portion of the month. There is a noticeable absence of codlin moth attack to date. The fruit crop generally is comparatively free from fungoid disease, possibly due to the adverse weather conditions.

Nelson.—Apples: The Apple crop developing well. Some russeting and crack in Dunn's, but much better crop than last year. Cox's promise a good exportable crop. Jonathans heavy. Delicious above average. London Pippin medium. Wolseley good. Sturmers good, but Black Spot prevalent in some blocks. Export Apple crop should be 25 per cent. above last year. **Apricots:** Light crop. **Nectarines:** Heavy. **Peaches:** Good crop developing, best for some years. **Pears:** Developing well. **Plums:** Good average crop. **Raspberries:** Good crop maturing. **Strawberries:** Good crop.

Marlborough. — Apples: Heavy crops maturing in first class condition. **Apricots:** Good crops now being harvested; fruit particularly well grown. **Cherries:** Good crops have been realised, now about over. **Nectarines and Peaches:** Good crops. **Pears:** Fair to good crops. **Plums:** Heavy crops. Early varieties now coming on to market. **Raspberries:** Fair to good crops now being gathered.

Canterbury.—Apples: Crops generally good; some varieties have fallen heavily. A good deal of spot in some localities. **Apricots:** Crops good. **Cherries:** Crops were good. Prices very erratic owing to unfavorable weather conditions. **Nectarines:** Very especially Winter Nelis. **Plums:** Very good in most varieties. **Plums (Japanese):** Heavy. **Raspberries:** South Canterbury gardens looking well. A few Papanui gardens not looking as promising as usual.

Otago and Southland. — Apples: Heavy crop, except Delicious, Lord Wolseley, Dunn's and Scarlet Nonpareil. There has been a heavier drop of fruit than usual in some varieties. Black Spot is in evidence throughout the district. **Apricots:** Heavy crop. There has been a heavy dropping of Roxburgh Reds, and in some localities Oullins have also fallen to some extent. **Cherries:** Light to average. There has been a heavy dropping of Cherries. Early varieties finished picking. **Gooseberries, Raspberries and Walnuts:** Average crop. **Nectarines:** Light crop. **Peaches:** Light to average. **Pears:** Light to average. Black Spot in evidence to a slight extent. **Plums:** Heavy crop. Silver blight is in evidence to a greater extent this season than it has been during the past three seasons. **Plums (Japanese):** Heavy crop. **Strawberries:** Heavy crop.

Central Otago.—Apples: Heavy in parts; very light in others, owing to frost. **Apricots:** Very heavy crop, especially of late varieties. **Cherries:** Good crop. **Nectarines, Raspberries, and Walnuts:** Good. **Peaches:** Thinned somewhat by frost in parts. **Pears:** Heavy. **Strawberries:** Good crop harvested.

F. W. Vear

Fruit & Vegetable Salesman

Commission Agent

WESTERN MARKET

MELBOURNE, VIC.

Highest Market Rates Assured

Prompt Settlements

NEW ZEALAND.

Orchard Notes for February.

Spraying.

THE CURRENT PERIOD'S spraying for the control of **codlin moth** is a necessary spray, and should not be omitted by growers. All infected fruits should be gathered and immediately destroyed. Where **powdery mildew** is in evidence the trees should again be thoroughly sprayed with precipitated sulphur (10 lb. to 12 lb. per 100 gallons). An examination of the trees should be made for **red mite** and **Apple-leaf-hopper** infection, and where either of these pests is discovered a control spray should be applied to kill the insects before they have an opportunity of laying overwintering eggs.

Where black spot of Apple and Pear has been troublesome, a close inspection of the fruit and foliage should now be regularly made until the fruit is gathered, in order to detect the infection when it first appears. The first evidence of the disease should be regarded as the danger signal, and, where conditions permit, the infected varieties should be sprayed immediately to prevent infection or blemish. **Brown rot** infected fruits and mummies should be carefully gathered and destroyed, as the mummies are a source by which brown rot infection is carried over to subsequent seasons.

Spray Residue.

In connection with spraying, prospective shippers will have to consider the matter of spray residue on fruit intended for export. It is very necessary to avoid having an excess of residue on the fruit, and to this end growers are advised to carefully consider the sprays and their ingredients which they intend to apply at the last spraying prior to picking. It is advisable in this respect to omit the spreader, to avoid any excess of lime which it has been the custom to add to any mixture, and to omit black-leaf 40 from the lime-sulphur and arsenate of lead combination. Growers who have had occasion to wipe the residue from their fruit before wrapping, will appreciate the benefit to be obtained by eliminating or reducing from late sprays the quantity of certain ingredients which usually cause an objectionable marking or stain.

Cultivation.

Cultivation should be continued during the present month in order to destroy weeds and to stir the soil, also to conserve the soil-moisture, as the trees are usually in most need of moisture at this period in the growth of the fruit. In working the ground it is important that the implement

used should not go so deeply into the soil as to disturb the fine white root-hairs through which the trees feed, or to expose them to the sun and the atmosphere.

Cover Crops.

An important matter in connection with the management of the orchard at this period of the year is the sowing of a cover crop. In many of our soils it has been demonstrated that the addition of organic matter is very beneficial. Amongst the benefits to be derived from the use of cover crops are the following:—(1) Improvement of the physical conditions of the soil and sub-soil; (2) addition of organic matter to soil; (3) leguminous crops add nitrogen to the soil; (4) cover-crops in general use up soluble plant-foods, and thus prevent their loss by being washed out by autumn and winter rains; (5) they tend to cause fruit and growth to ripen earlier than is the case where cover-crops are not used; (6) they prevent erosion on steep slopes. The most satisfactory and cheapest method of supplying humus to the soil is by growing such green crops as blue lupins (40 lb. to 50 lb. per acre); oats and vetches (oats 1½ bushels, vetches 1 bushel, per acre); Canadian field peas (60 lb. per acre); mustard (sown broadcast, 6 lb. to 8 lb. per acre); Cape barley (1 bushel per acre).

In considering the crop to be sown it should be remembered that such leguminous crops as lupins, peas, and vetches supply in addition to organic matter, a considerable amount of nitrogen. To obtain the maximum results it is advisable to sow a fertiliser with the crop—say, superphosphate at the rate of 2 cwt. per acre.

Budding.

The latter part of January and early February is a good time for doing this work. Select the buds from well-developed shoots of the present season's growth, and from trees which have borne regularly good crops of fruit of the best quality. Where old trees are being reworked buds should be inserted on the outer side of the stock to be worked, as this will result in a more open head and a better-shaped tree than if worked on the inner side of the shoots.

Picking.

In picking all kinds of fruit, it is important that it should be perfectly dry, especially if it is intended to store it for some time. Picking should not be commenced in the morning until the dew has left the fruit. The harvesting of the Apple and Pear crop will now have begun. Apples should be gathered immediately they become ripe—but not fully ripe. When left too long on the trees they are apt, after a period of storage to become mealy and lose flavor. The period for which fully ripe fruit may be held for market purposes is very short. If picked too soon the fruit will be poor in quality and flavor, and will wilt and shrivel in storage. Late varieties of Apples are usually picked when fully mature and when the deep green ground color is assuming a yellowish tone. As these varieties ripen slowly, several months usually elapse before they are eating-ripe.

The proper degree of maturity may be gauged in various ways, and it is not advisable to rely solely on any one of the following indications of ripeness when determining whether the fruit is ready to pick:—(1) The fruits should have the necessary amount of red color usually associated with the variety, and according to the position of the fruit on the tree; (2) distinct change of ground color towards light yellow—the hard green color should have gone; (3) ease with which stem parts from the spur. Some pickers rely mainly on the good brown color of the seeds as an indication of ripeness, but this way is unreliable for some varieties. Sturmer, for instance, is under certain conditions still immature when the pips are quite brown. Apples should be picked with stems intact.

Pears are somewhat peculiar in their manner of ripening, and to develop the best quality the fruit should be gathered when it is green but matured. If left to become too ripe on the trees, some varieties develop gritty granules in the flesh, while others rot at the core and generally do not develop the luscious and finest flavors possessed by fruits gathered from the tree before they are ripe. Pears should also be picked with stems intact.

Quinces should be fully ripe before they are gathered.

Care should be taken not to break off more fruit-spurs than can possibly be avoided, as the spurs are required for the production of subsequent crops. Pickers should be instructed to place the thumb beside the joint between the stem of the fruit and the spur, and then bend the fruit sharply towards the thumb; if the fruit is sufficiently mature, the stem will readily part from the spur. Fruit damaged through the pulling-out of the stem soon commences to decay. Fruit generally does not ripen evenly on the individual trees, and to obtain the best results three or four pickings should be made. The smaller fruit and that low down on the tree should generally be gathered at the last picking. It is well to remember that there is a considerable variation in the ripening of the different varieties and of the same varieties under different conditions, and to obtain the best results a careful study should be made by growers.

Export of Fruit.

It is important, and in the best interests of every grower that only the best fruit should be sent away. The fruit should neither be too green nor too ripe. The best time generally to pick for export is when the dark green ground color changes towards a light yellow, and when the stem will part from the spur. The fruit should be well graded as to color, size, and blemish. The wrapping, labelling, and stamping should be neatly done, and the cases packed full and sufficiently tight to prevent looseness developing in the handling and storage. Much damage is occasioned to fruit through very tight packing. Every care should be used to prevent bruising. Throughout all the handlings the fruit receives, everything possible should be done to cause it to open up in such condition that it will more than favorably compare with the fruit of our competitors on the markets of the United Kingdom and elsewhere.—W. K. Dallas, Orchard Instructor, Dunedin.

Citrus Culture.

Continued cultivation will still be the main work in the Citrus grove. When heavy rainfall is experienced, root-action near the surface is very pronounced, and unless the land is constantly cultivated the surface soil may become a mass of roots which will be badly parched during the drier season to come. With the surface soil well tilled, however, roots will be maintained at a level where more equable moisture may be expected. Should dry weather set in some mulch will be required. Stable manure is to be preferred, but hay, straw, or any available litter will serve the purpose. Take care not to pile any material round the trunk of the tree, as bark-injury may be caused by such contact.

If wood-growth is of a soft nature, and in excess of the amount required to properly build or furnish the tree, much benefit will be derived from the suppression of undesirable growth, in order that the wood really required may be better matured and more stable.

Humid conditions suitable for the spread of verrucosis and grey scab will necessitate a further spray of Bordeaux, 3-4-40, if the advancing crop is to be maintained clean.—W. H. Rice, Orchard Instructor, Auckland, in the "N.Z. Journal of Agriculture."

The supreme h.p. is not horse power, but heart power. It is the most powerful of all prime movers.

Cold Storage In Australasia

APPLE SCALD AND WILT IN COOL STORAGE FRUIT.

A Paper read by Victorian Cool Stores Conference, held at Box Hill on January 10, 1928.

By Mr. A. Powell, Engineer, Blackburn Cool Stores.

EVERY FRUITGROWER realises the necessity of selecting a suitable position for the orchard, also of planting varieties most suitable for storage, and then making a close study of those varieties under different conditions, and by draining, irrigating, manuring, pruning, spraying, time for picking, handling, and placing in cool storage space correctly, as all these factors play a big part, and affect the keeping qualities of the fruit during its cool storage life. Only by a very careful study of these points can the present-day fruit-grower hope to make a success of his business.

We have still a lot to learn in connection with many of the troubles occurring while the fruit is in the cool store.

The Apple Scald,

so prevalent in the Jonathan variety, is a tremendous source of loss to the grower, and, in the past, the cool store has had to take the blame, as scald is not found outside the store under any conditions. We now realise that, like Bitter Pit, Apple Scald has its beginning before the fruit is picked, and that any storage conditions where temperatures are reduced will assist the development of the trouble. Scald may be found where temperatures range from 30 deg. to 36 deg., and also where lower temperatures are maintained. But there is no doubt that storage conditions are responsible for the development, though not the original cause of the scald.

Many growers have remarked to me, on finding scald in their fruit, that if the fruit were held at a higher temperature the tendency to scald would be reduced. But for consistent results temperatures must be brought below 30 deg., and held there. We would like a discussion on this point.

Unless we have the facilities to enable us to cope with the heat brought in continuously during the time that the store is being filled, then it is not possible for us to get the best results, especially where Pears are held for seven or eight months.

There is no doubt that, if temperatures could be brought to 28 or 29 deg. daily, and held with a rise of 3 deg., the results for the season must be good.

Direct Expansion System Popular in U.S.A.

In the United States, the Fruit Cool Stores are mostly using direct expansion. A friend of mine travelled through all the fruit country there and said that he never saw anything but direct expansion chambers for fruit storage. The reason for this must be greater efficiency gained by having the cooling coils in each chamber, and by this means keeping a more even temperature in the chamber continuously. The overhead ceiling draught gives splendid results, also, as the air is thoroughly distributed at the hottest point of the chamber, and by being reduced evenly, the chamber is more likely to hold. But the Americans must find the direct system more satisfactory, and the reason for this is the fact that a more even temperature is maintained when the coils are right in each chamber.

A still more efficient plant could be built if the direct expansion and false ceiling draught were combined, and the air drawn from near the floor under the coils delivered over the false ceiling.

A Good Deal of Wilt

is found in some varieties, and is generally more prevalent when the growing and maturing have taken place under dry weather conditions. There is no doubt that where Wilt is found under good storage conditions it reflects on the health of the tree, or in some instances is the result of fluctuating temperatures, as it is often detected right at the top of a stack in cool storage chambers.

There has been a good deal of experimental work going on for years with water in the cool chambers and dampness of the fruit and cases to check Wilt in Apples.

But where the temperatures are held as stated, experience shows no Wilt which cannot be accounted for by the grower. If the fault is at the store end, the Wilt is generally on the top case, this being the hottest part of the chamber—if temperatures are not reduced and maintained. On the other hand, Wilt may be seen under damp conditions, if the temperatures are not reduced under 40 deg., and severe loss is felt if there is any sign of Black Spot, and moisture is present on or near the fruit. Decay is also brought about by moisture where the Apples touch one another.

This proves that low, even temperatures and not moisture are responsible for the best results.

Growers can Help.

Having stressed the advantages to be gained by holding the chambers at a low, even temperature, it is timely to point out how it is necessary for the grower to assist the Engineer to obtain the best results by placing his fruit in the chamber as cool and as early in the day as possible, and when carting to the cool store in the heat of the day, to place a covering over the fruit to protect it from the sun's rays, and so stop unnecessary heat going into the chambers.

Quite a number of growers do not make any attempt to carry either of these points into practice. Surely, if they fully realised the benefit they derive in getting the best results possible, they would not neglect them. Many growers have one load to go to the store; as the store closes at 3 p.m. they leave it until 2.45 p.m. before delivering this load. On a very hot day, this is unfair to themselves and very unfair to the grower, holding Pears in the next space who wishes to hold them for a long period.

Asbestos Insulation.

A good deal could be said for Asbestos Millboard when building a cool store, as its heat-resisting properties are well known. The cost is not against it, as sheets of 1/32 millboard, size 40in. x 40in., weight 1½ lbs., would cost 3¾d. per lb. in ton lots. If used between the outside layers of board, a decided improvement would be noticeable, especially during our summer months.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

General Australasian Representative:

H. G. COLOMBIE

Temple Court, Collins Street, Melbourne

'Phone: F3284.

Telegraphic Address: "Columbine," Melbourne.

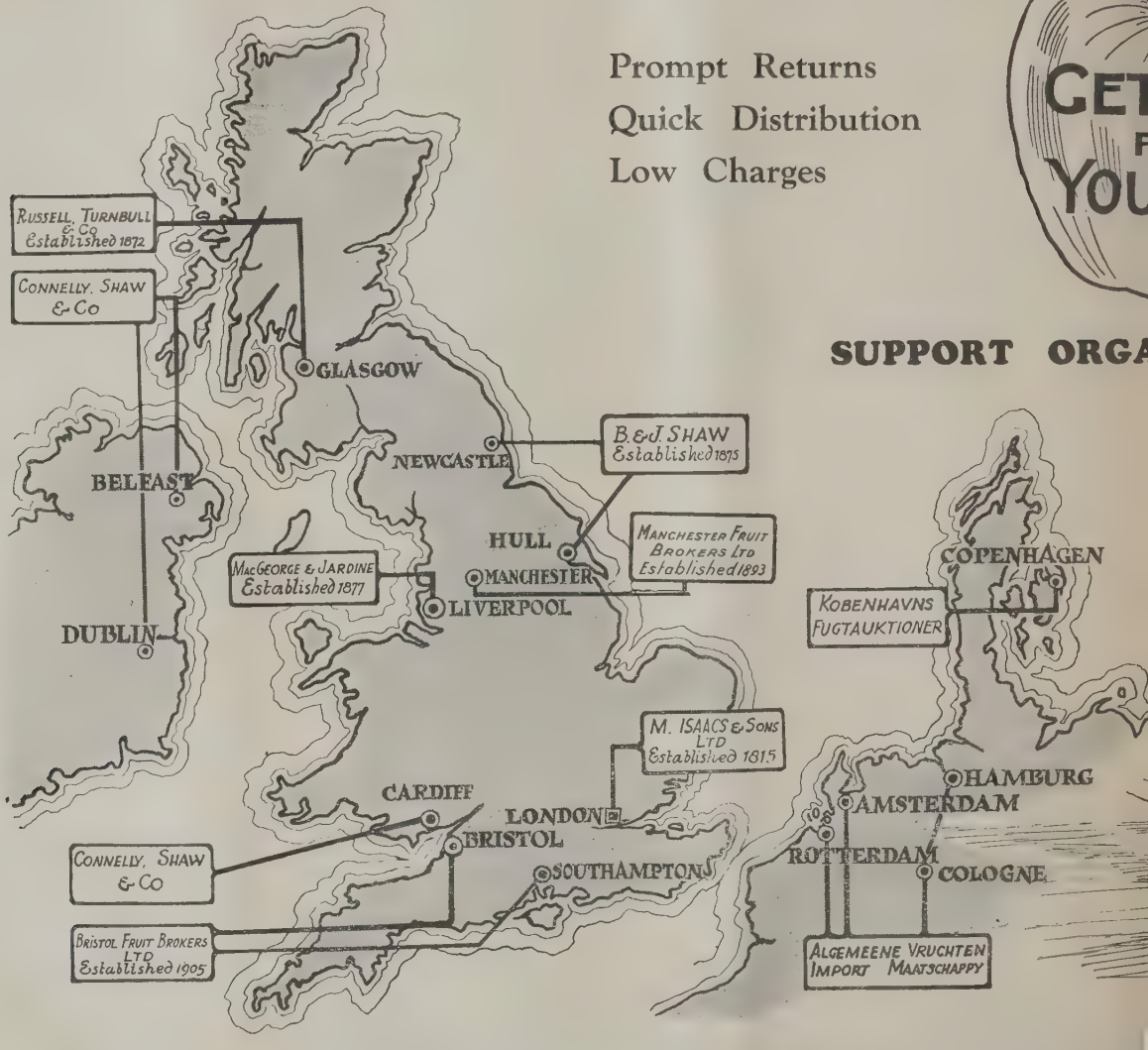
Over twenty years' experience in the marketing of fruit in the United Kingdom and on the Continent.

INCREASE Y

BY

COMPLETE AND

Prompt Returns
Quick Distribution
Low Charges



SUPPORT ORGA

By entrusting the sale of their fruit to any of the firms dealing with Federated Brokers and obtaining the full benef above-board marketing.

The marketing of fruit is a complicated and delicate op perience and special skill. The Brokers referred to possess the

Every advantage of orderly marketing, regulated offering knowledge of what happens to your fruit, is assured to you by t tion not built up on paper, but created by generations of solid

UR RETURNS

NG THIS

RECT ORGANISATION

ORE

RUIT

ED MARKETING

For shipping space, advances, etc., apply to the Shipping Representatives shown on this map.

AUSTRALIAN GROWERS!

Profit by the experience of others, and **SUPPORT ORGANISED MARKETING.**

CENTRALISE the sale of your fruit **IN** the **ONE RECOGNISED AUCTION SALEROOM AT EACH PORT,** where Overseas Fruit is concentrated, and where large numbers of buyers attend regularly, ensuring **WIDE DISTRIBUTION.**

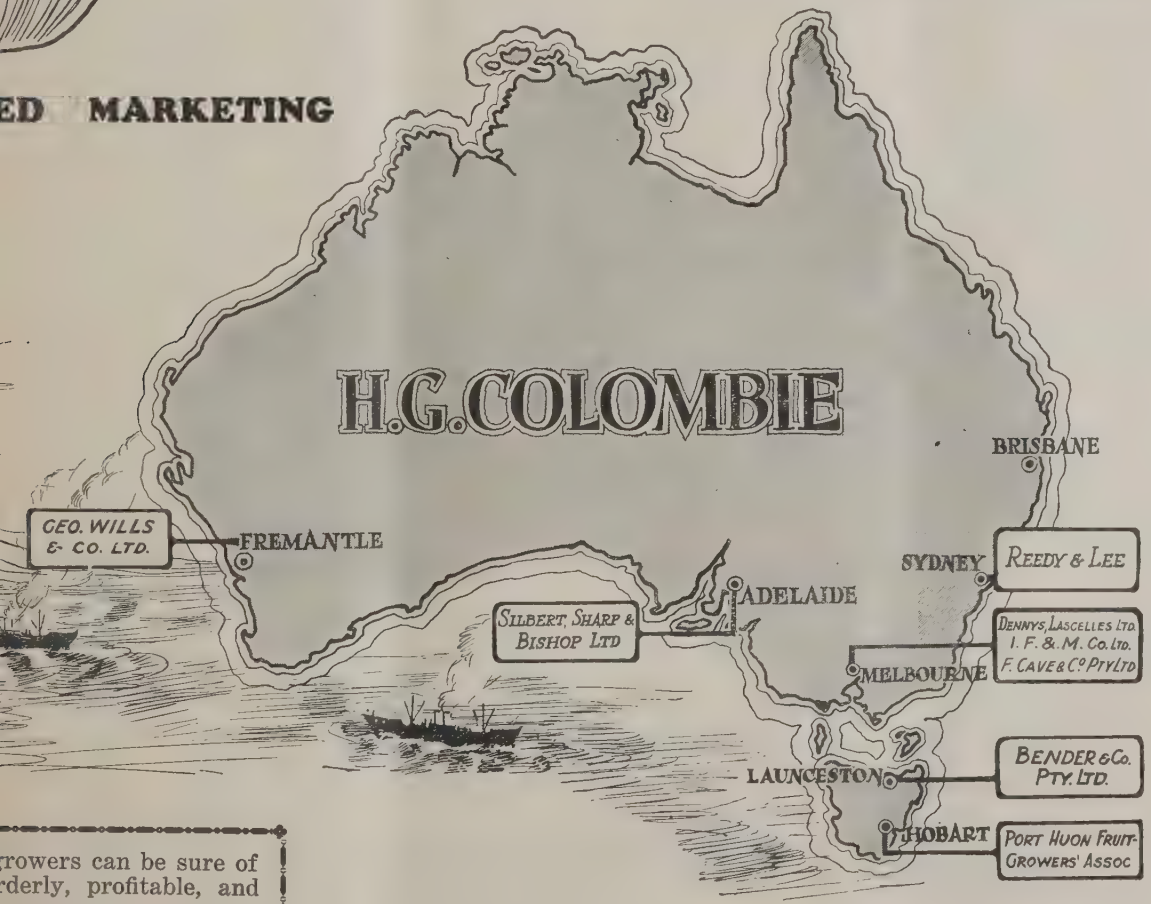
This **CONCENTRATION ENABLES BROKERS** to **REGULATE SUPPLIES** and **STABILISE PRICES.**

By this system **BUYERS** are **MADE** to **COMPETE** for the fruit to the **BENEFIT** of **YOUR RESULTS;** whilst by other methods Salesmen compete to obtain buyers.

CATALOGUES are printed for Buyers before sale, and reprinted after sale, **SHOWING ACTUAL PRICES PAID for your fruit.** No manipulation of results possible.

Parcels are sub-divided to enable all buyers to compete on equal footing.

Each parcel is valued by Auctioneer before sale, and lots not realising reserve prices are withdrawn.



rowers can be sure of
rderly, profitable, and

calling for great ex-
l.

le markets, and full
nisation; an organisa-
d practical experience.

Tasmania

Export :: Seasonable News and Notes

(By Our Correspondent)

FOLLOWING the warm, dry weather which was experienced during early December, a very beneficial change was experienced at Christmas and the New Year, when good rains occurred throughout the fruit districts of the State. These were most opportune, especially for the berry fruits, and were the means of saving the raspberry crop in many Southern centres where the outlook was becoming serious.

It is evident that the season is about a week ahead of normal years, and Apples and Pears are generally showing good development. Since my last report, a thinning of the Apple crops has been reported in some districts, particularly Scarlets and Jonathans, but the yield still promises to be slightly above normal (3½ million bushels).

At the time of writing, the early varieties, Beauty of Bath, Quarrendon, and Gravenstein are appearing on the local markets, and are in good demand after the shortage that was experienced last season.

Fruitgrowers are busily preparing for the coming season, and it is evident that if the overseas export reaches the figure anticipated (2,000,000 bushels) the organisation must be efficient, if this quantity is to be shipped in the limited period available.

The reports that have been received from all the mainland States (except W.A.) and New Zealand, of good crops, will also encourage growers to forward a larger proportion of their crops to overseas markets, or it is possible that this estimate may be slightly exceeded.

Overseas Export Regulations.

A new regulation has been promulgated by the Department of Markets and Migration which is intended to prevent the export of immature fruit to "overseas markets."

This is worded rather quaintly, in that it definitely lays down that no fruit shall be exported before the 1st March, and then allows early varieties that are in a sufficiently matured condition to be forwarded.

It is evident that the regulation is going to be rather difficult to administer. Apart from the question as to which Apples may be classed as early varieties, the different conditions under which they are grown make it almost impossible to draw up a list that will be suitable for all districts, and which will ensure that even one variety will be sufficiently matured for export throughout the State previous to the date proclaimed. In the meantime arrangements have to be made for the vessels to visit Hobart and the agents naturally desire to know the quantities that will be available.

The export of immature fruit is certainly inimical to the development of the overseas trade, but apart from a few growers who may be inclined to risk mid-season varieties in the early boats, very little of this class of fruit is forwarded.

It is also announced that growers will have the option of sizing their fruit to eighths during the coming season.

This amendment will be welcomed, as it allows the careful grower who packs his fruit to the eighth-inch sizes to mark the container accordingly, and obtain the full benefit of the sale of these sizes upon the markets.

Tasmanian Representative on British Markets.

At a recent meeting of the State Fruit Advisory Board, consideration was given to a proposal to appoint a representative who would generally supervise the sales of Tasmanian fruit, and look after exporters' interests on the British markets.

It is felt that although the majority of growers were opposed to the system of control that was embodied in the Fresh Fruits Marketing Act, they would welcome the appointment of a business man who would act in the capacity mentioned and keep in direct touch with the marketing of Tasmanian fruit.

The members of the Advisory Board generally expressed themselves in favor of the principle of the resolution and recommended that the matter be brought before the Annual Conferences for decision as to whether action should be taken previous to the 1929 season.

Bounty on Dried Apples.

This matter has been under consideration for a number of years, and representations from time to time have been made to the Commonwealth authorities for assistance to the dried Apple industry in the form of a bounty on overseas exports.

The position briefly is—that owing to the limited market available in Australia and the competition that is experienced from countries which are nearer the European markets, and can produce at a lower cost—the industry has been seriously handicapped in finding a payable return for the quantities processed, and the

DENNIS & COOPER LTD.

COVENT GARDEN, LONDON, ENGLAND

Fruit Brokers and Commission Salesmen

FINANCIAL FACILITIES OFFERED

Make your Shipments of APPLES through

BENDER & CO. PTY. LTD.

Hobart Office: 4 Davey Street. 100 Elizabeth Street, LAUNCESTON

WHO WILL SUPPLY ALL INFORMATION

evaporators have been working under an arrangement which practically limited the production to the Australian requirements.

The matter has now been delegated to the Development and Migration Commission for investigation, and an officer (Mr. E. Pringle) is at present visiting Tasmania and enquiring into the different phases of production and relationship of the dried Apple trade to the orcharding industry.

Shipment of Berry Fruits.

Following the visit of Mr. W. R. Bunker, who was appointed by the Development and Migration Commission to investigate the possibilities of inaugurating a trade in fresh berry fruits between Tasmania and the mainland, arrangements were made for an experimental shipment of Strawberries to be forwarded to the Sydney market. The berries were carefully selected, packed in crates and carried in the cool chamber of the t.s. "Zealandia."

Fruit Shipments
United Kingdom and the Continent

W. D. PEACOCK & CO.

24 Southwark St, London Bridge, LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

Although the experiment was limited to the finest variety of Strawberry (Ettersburgh), and every precaution taken to ensure quick transit, both to the shipping wharf and market, on arrival, the results were generally unsatisfactory, and it seems evident that the risks which will always be present in shipping, such fruits will preclude the development of the trade until special facilities are available.

Bitter Pit.

The State Fruit Advisory Board and fruitgrowers generally, are appreciative of the work that has been performed by the officers of the Cambridge Low Temperature Station in investigating problems of fruit carriage to overseas markets.

A resolution was passed at the January meeting requesting the Commonwealth Council of Scientific and Industrial Research, to arrange for the continuation of this work during the coming season, especially in reference to the occurrence of "bitter pit" amongst fruit cargoes.

Personal.

Mr. E. Ross, a director of H. Jones & Co. Ltd., has returned from a trip to the European markets, which also included a visit to the principal American Apple producing centres.

During December and January he visited the different fruit districts in Tasmania, and delivered a series of interesting lectures on the experiences and results of his investigations.

Following upon the resignation of Mr. Neil Campbell, M.H.A., as Chairman of the Fruit Advisory Board, a ballot was held at the December meeting, and Mr. B. J. Pearsall, of Kingston, S. Tas., was elected to this position for the ensuing year.

Mr. Pearsall is a very popular man in fruit circles, and obtained a decided majority for the Kingsborough and Esperance division at the recent election. He is a director of the Port Huon Fruitgrowers' Association, and also Warden of the Kingsborough Municipal Council.

STATE FRUIT ADVISORY BOARD.

A meeting of the State Fruit Advisory Board was held at the Department of Agriculture, Hobart, on 13th January, 1928. Present: Messrs. B. J. Pearsall (chairman), O. J. Morrisby, T. J. Eddington, A. Davies, F. Peacock, V. J. Skinner, Neil Campbell, M.H.A.; J. Piggott, M.H.A., and P. H. Thomas (Secretary).

Shipment of Immature Fruit.—A communication was received from the Collector of Customs detailing the provisions of the new regulation which had been introduced to try and prevent the shipment of immature fruit to overseas markets.

After a good deal of discussion, it was decided to ask the Minister to give some assurance that the normal shipments during February from Tasmania would not be interrupted, as Tasmania had always successfully shipped large quantities of fruit in February; further, this season was earlier than an average one in Tasmania, and growers desired to export from 150,000 to 200,000 cases to the United Kingdom and Continent.

Superintendent of Research.—The chairman tendered a welcome to Dr. Alexander Nelson, recently appointed superintendent of research to the Agricultural Department. He stated that the Board would be only too pleased to assist Dr. Nelson in his work. Dr. Nelson, in reply, said that research work in Tasmania had been strengthened, and it would mean that the growers would be given more facilities.

Co-operation with Agricultural Bureau.—It was decided to co-operate with the Agricultural Bureau in advising the State executive on matters relating to the fruit industry.

Carriage of Fruit and Bitter Pit.—Following a suggestion from H. Jones & Co., Launceston growers, it was decided to ask the Federal Government to endeavour to secure the services of Dr. A. J. Smith to carry out further scientific research relative to the carriage of fruit overseas and bitter pit."

FIGHTING INSECT PESTS IN THE ORCHARD AND VINEYARD.

Vine Moth, Light Brown Apple Moth.

The caterpillars of the abovenamed moths are exceedingly prevalent on bunches of young Grapes this season. They are doing a fair amount of damage. The latter is particularly destructive. Spray thoroughly with arsenate of lead. Force the spray well in amongst the Grapes.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.

Manufacturers IXL Jam and Canned Fruits.

Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.

All Orchard Supplies available at all times.

Agents for—

Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.

H. JONES & CO. LTD.,
HOBART

Apple Pinara Moth.

The large greyish caterpillars of this moth are rather numerous this season. They are very destructive to the foliage and fruit spurs of Apple trees. Occasionally they will destroy young Apples. Spray with arsenate of lead, 1 in 25.

Rust Mite of Orange and Lemon.

The adult mites are very small, almost invisible to the naked eye without the aid of a magnifying lens. They are light yellow in color, long and pointed, with two pairs of legs near the head. The presence of the mite is easily noticed by the silvery chafing of the skin of the fruit, due to the destruction of the oil cells. Remedies same as for red spider.

(Continued on next page, column 3)

1928 Apple Export

February Shipments Discussed

"There is no embargo. I hope as much fruit as possible will be sent in February," says the Minister for Markets.

CONSIDERABLE misapprehension among Apple growers and exporters was caused through the publication of a statement under the authority of the Minister of Markets and Migration (Mr. T. Paterson) on January 7, regarding February shipment of Apples. The Minister's statement set out that in order to guard against the exportation of immature fruit this season, it had been decided that, generally speaking, Apples would not be fit for export before March 1, therefore would not be allowed shipment. With early varieties from certain districts, the exportation would not be prevented, provided the supervising inspector was satisfied the fruit was sufficiently matured.

Protests were received from Tasmania. Deputations from growers, shipping companies, and the Victorian Fruit Exporters Handling Committee met the Minister, when it was pointed out that much fruit in February boats was used for cooking, and who could define its "maturity?" The early boats usually brought the highest returns. This season was a fortnight earlier than usual. This trade had been satisfactorily conducted for 30 years. The shipping space had been engaged, and much fruit for February shipment was being paid for f.o.b. Cables were produced from London buyers emphasising the importance of shipping in February.

Normal specimens of Five Crowns and Jonathans were submitted showing their advanced condition at that date (January 12). Yet these would be on the trees for nearly a month longer before shipment.

In reply, the Minister said complaints had been received from England regarding the immaturity of the fruit in the early boats; the high prices for the early fruit often came down with a run if buyers were disappointed. In Spain a date had been set before which Oranges could not be exported. Inspectors would visit fruit districts, and would inform growers if the fruit were sufficiently mature for export.

Members of the deputation pointed out that immature Oranges were not used for cooking, and requested that as this was an early season the export should go on as in previous years.

The Minister said he would be sorry if his statement had been misinterpreted. There was no "embargo" against shipment in February. Personally, he hoped that as much as possible would be shipped in February. All he desired to do was to set a date (March 1) up to which growers' consignments would be examined for maturity.

In reply to a question the Minister said his Department would keep in touch with the Fruit Exporters' Handling Committee before pronouncements of a similar nature were made in future.

EXPORT TOTALS.

It is anticipated that Australia will export about two and a half million bushels this season to England and the Continent.

The New Zealand total is expected to be in the region of 600,000 bushels.

T. J. POUPART

Ltd.

Covent Garden, London, W.C.2

and 3 Love Lane, Eastcheap, E.C.2

The Premier Firm of Fruit Salesmen in Great Britain

Sale by Private Treaty only
(GIVES BEST RESULTS)

Commission the exclusive basis (purchase propositions cannot be considered)
Advances offered to cover freight and accessory charges

Victorian Representative :

FRED. J. ANDREW

416 Little Collins Street, Melbourne

(*Continued from previous page*)

Looper Caterpillars.

The present season is a particularly bad one for these most destructive pests. They eat small holes in the Apples, disfiguring them and making them unsaleable. Fortunately they are easily killed by any of the arsenical sprays.

Woolly Aphids: Aphelinus parasite.

The woolly aphid parasite has made much headway this season, and it is now firmly established throughout the Apple orchards of Victoria. In the Shepparton, Pakenham, and other districts it has done particularly good work in controlling this very destructive insect.

Bag Moth Caterpillars.

These destructive insects are doing damage to Quinces and Apples. Spray with arsenate of lead.

Bryobia Mite and Red Spider.

See "The Fruit World," December 1, 1927, p. 517.

Painted Apple Moth; Light Brown Apple Moth.

See "The Fruit World," December 1, 1927, p. 517.

Codlin Moth.

A sharp lookout should be kept for codlin moth caterpillars, as the moths are now flying about in fair numbers. Spray with arsenate of lead, 1 in 25.

Orange Butterfly.

These butterflies are now fairly common in Citrus orchards, and are commencing to deposit their eggs on the trees. When the caterpillars are hatched, they commence to feed on the leaves and young fruits, causing a fair amount of damage. Spray the trees thoroughly with arsenate of lead, 1 lb. to 25 gallons of water.

Fertiliser Trade

YOUNG MAN, aged 26, with sound practical knowledge of fertilisers and business in general, now holding responsible position in the fertiliser trade in the Tropics, desires advisory or other responsible post, or to get in touch with Firm desirous of opening up business in Fertilisers, Australia or elsewhere.

Letters under **XYZ, c/o "FRUIT WORLD," Bank House, Melbourne.**

Elephant Beetle of Orange.

This large brown weevil is a serious pest in Citrus orchards in some parts of Victoria. They deposit their eggs in a small slit in the tree made by the beetle. The grubs bore into the trunk of the tree, causing the tree to become sickly and to die. As the beetles are now on the trees, spray with deterrents such as tar water. This is made as follows:—

1 quart phenyle,
3 lbs. washing soda,
1 bar yellow soap,
40 gallons water.

The soap is shredded and dissolved in hot water. The other ingredients are added, and the mixture made up to 40 gallons.

CHERRY RIPE.

(By Fred. Charlick, Adelaide.)

January 5, 1928.

WE DON'T OFTEN get the opportunity of extracting coins from the Melbourne cash registers, but for the past six weeks very big sums have crossed the border to us. We have had a phenomenal crop of Cherries; they have been fine, large and luscious, and thousands of cases have been sent from here by rail almost every day at prices round about 15/- per case. Some of these Cherries were picked at mid-day, put on the express at 4 p.m., and reached Melbourne at 9 o'clock next day, and were eaten within 24 hours, a pretty good record for swiftness. Beside the Melbourne lots, there have been great quantities sent to Western Australia by rail, and as these have all been good carrying sorts, they have arrived firm and attractive.

The season was a most favorable one, and the trees were heavily loaded, and were quite a picture to motorists when passing the gardens. Some of the larger trees carried several cases, and prices have ranged from 15/- to £1 a case. A curious thing in their growth was the week's rain in the early part of December, which was expected to split the berries, but instead of doing harm, it improved the crop by ten per cent.

Most of the Cherries are grown in the hills and slopes to the east of the city, Norton's Summit and Cherryville being the chief places; they are eight to ten miles away, and the city is easily reached by motors for quick transport and shipment. One prominent grower picked 7,000 cases. The orders for these poured in at such a rate that considerable activity was necessary, and a minimum of sleep was availed of, picture shows and Sunday services being quite eliminated; some of the pickers worked long hours, Saturdays and Sundays, and it is astonishing how expert they were, and how continuous their efforts can be without exhaustion.

The biggest grower in Australia is at Orange, N.S.W., where an Italian has 100 acres of Cherries, and has picked over 10,000 cases this season, most of which were sent to the Sydney market.

If you have a few spare £1 notes a little later, we shall be glad to have them in exchange for some of our Apples, the present crop of which promises to be a record one. Sydney and Western Australian buyers have already been seeking supplies for future delivery.

(Victoria also expects to harvest a heavy crop of Apples.—Ed.)

COST OF BORES ON IRRIGATION AREAS.

Mr. H. V. C. Thorby, Minister for Agriculture in N.S.W., who is also Chairman of the Water Conservation and Irrigation Commission, referring to the recent approval of Cabinet providing for altered charges in respect of bores sunk by the Water Conservation and Irrigation Commission, explained that with a view to assisting settlers who may be so unfortunate in future as not to obtain by the sinking of a bore a supply of water in excess of 100 gallons per hour, or even where a supply is obtained but is not serviceable, the charge in such circumstances would be reduced to 4/- a foot, and to offset in a measure the cost involved in this liberal concession an additional footage charge ranging from 2/- to 3/- will be added to the cost of successful bores.

The cost of an unsuccessful bore is a heavy liability to a settler, for which he has no asset. This being so, Mr. Thorby is confident that all settlers requiring bores in future will gladly accept the extra footage charge proposed for successful bores, and by so doing will eliminate the risk of being burdened with the heavy cost of an unsuccessful bore.

GENUINE

"Black Leaf 40"

IN

10lb. & 2lb. tins

DISTRIBUTORS

The PRODUCERS' DISTRIBUTING Society Limited.

SYDNEY and MELBOURNE

"ORCHARD DAYS" AT STATE FARMS.

With the object of inducing commercial orchardists to visit the State farms, and to bring about closer co-operation between the Department and themselves, the newly appointed Superintendent of Horticulture in New South Wales (Mr. C. G. Savage) proposes to introduce an "orchard day" at each of the various State farms. The first will probably be held at Bathurst, the centre of several of the chief inland fruitgrowing districts.

Man was made of dust—woman saw-dust, and liked it.

(Continued from Page 25)

Citrus Imports. — Consideration was given to a proposal remitted from the Metropolitan District Conference held at Windsor, to the effect that further action should be taken by the Federation to obtain the total prohibition of the importation of Citrus fruits, but in the meantime special representation be made with regard to fruit being brought in by passengers on overseas vessels or from shipping stores. The Board decided to take action along these lines.

Fruit for Factories.—Growers were advised that fruit for factories need not be packed in new bags; as long as the bags were clean they should be acceptable.

Organisation. — The Board decided to appoint an organiser at once to proceed with the organisation of growers in fruitgrowing districts, and applications are to be invited immediately to this appointment, the salary being at the rate of £400 per annum. The successful applicant will be required to supply his own car for which a mileage rate will be allowed, as well as hotel expenses.

Farm Produce Agents' Act.—One of the most important matters dealt with at the meeting was in connection with the proposed amendments to the Farm Produce Agents' Act. After giving very careful consideration the Board decided to recommend certain amendments to the Government, but before doing so they will be submitted to the agents for an expression of their views. The amendments include provision for the registration of all those agents trading as merchants, the increase of the bond from £500 to £1,000, with a provision that the agents as a group might put up a joint bond for £10,000. It was also decided that if these amendments are accepted the Federation will recommend the deletion of the necessity for the keeping of a trust account, provided that the agent keeps a separate account for his fruit agency business. Consideration was also given to the terms of a proposed agreement to be entered into between the Agents and the Federation in regard to the selling conditions not covered by the Farm Produce Agents' Act.

BATLOW AGRICULTURAL SHOW.

The 20th Annual Show of the Batlow Agricultural Society will be held on Tuesday and Wednesday, March 27 and 28. The schedule is comprehensive, particularly in the fruit classes, and keen competition is expected. Entries close with the Secretary (Mr. C. S. Gregory, Batlow), on March 21.

New South Wales

Orchard Notes for February.

Fruitgrowers' Federation - News and Notes - Orchard Work.

(W. J. Allen and H. Broadfoot, in the "Agricultural Gazette)

THE FIGHT against the Codlin Moth pest must be maintained with energy and skill if satisfactory results are to be achieved. All cases which have been returned to the grower should be immersed in boiling water for at least three minutes. As it is important that the grub should be destroyed before it leaves infested fruit, all such fruit should be boiled or burnt.

During this month **fumigation of Citrus trees** can be carried out, but there are certain conditions to be observed. Since a tree suffering from lack of moisture or poor cultivation may be adversely affected by either spraying or fumigation, these operations should not be applied to trees out of condition. Fumigation, which is the most satisfactory method of controlling the scale pests that adversely affect fruit-trees, should not be carried on during the day. Night is the time for fumigation. Spraying should only be carried out on cool days.

Growers who intend to fumigate should remember that guesswork and carelessness may prove disastrous. Each tree should be measured and the dosage required for a tree of that particular size should be used. Growers are advised to obtain and study carefully the leaflet on fumigation, which may be obtained on application to the Under-Secretary of Agriculture, Sydney.

Budding.—Any unsatisfactory trees may still be reworked, provided they are in good condition. No matter what the variety or kind of tree, budding wood should be taken only from proved trees. Each tree has qualities which are capable of being transmitted, and, therefore, buds should be chosen from trees whose qualities are worth transmitting.

Manuring.—It cannot be expected that trees will continue to produce heavy crops unless they are supplied with suitable plant food. The stores of plant food in the soil are not inexhaustible, and it is necessary to supply manure or artificial fertiliser. Provided the orchard is in good condition, the present is a suitable month in which to apply fertilisers to citrus trees. They should be worked into the ground just outside the outer circumference of the tree.

Fruit for Canning.—On the Murrumbidgee Irrigation Area a large portion of the fruit crop produced is grown for canning purposes, and growers will be busy this month harvesting peaches and forwarding them to the factory. To secure the best results Peaches for canning purposes must be fully matured, but not overripe. The initial essentials to success in the canning of fruit depend upon the grower. Undersized, immature, mushy, carelessly handled fruit cannot give first-class canning results. Unfortunately, there are still growers who hug the fond delusion that a canning factory is a sort of medium for the disposal of inferior fruit. The sooner any grower who harbours this erroneous idea gets rid of it the better. It is no less necessary to grow good fruit and to handle it carefully for canning purposes than it is for marketing in a fresh state.

ORCHARDISTS!

TO OBTAIN THE BEST RESULTS

Use the Right Spray
at the Right Time

"YARRA" BRAND SPRAYS

are the cheapest, most effective and — economical on the market —
We manufacture a complete range — of Sprays for the Orchardist —
including Arsenate of Lead (paste and powder), Lime Sulphur, Red Spraying Oil, Copper Soda Mixture, Benzole Emulsion, Spray Spreader etc., etc., etc.

Prices and particulars on application to

PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street / 155 Yarra Street } Abbotsford, Vic.

T. STOTT & SONS

Fruit Merchants

Established 1882

A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

11 WESTERN MARKET,
Melbourne

Harvesting. — Fruit intended for drying is not fit for treatment until it is thoroughly ripe. The proper time for harvesting raisin grapes is when they are quite sweet, and prunes, if intended for drying, should not be gathered until they drop from the tree. Apple and Pear growers in inland districts or on the tablelands find that the demand upon their time is imperative. General rules respecting the best time to pick fruit are often misleading, as are most generalisations. William's Pears on the one hand, and Josephine de Malines and Packham's Triumph on the other hand, require different treatment. The former may be picked so soon as the fruit has reached a saleable size, for they will mature satisfactorily, but the latter must be allowed to hang until they are well matured. Apples may be marketed as cookers so long as they have reached a suitable size, whether matured or not, but this applies chiefly to the earlier crop. It is better not to market immature Apples of a late crop.

Many early varieties of Peaches, Plums, and Apricots marketed last year were extremely small. The market for this class of fruit is always dull in a normal season, and it is generally marketed at a loss to the grower. Growers would therefore be well advised to pay more attention to the thinning of their crops, as by so doing what is lost in number is much more than made up in size and quality. Very heavy crops are a severe strain upon a tree's vitality, and only in exceptional circumstances do they hold and mature to a good commercial size a big percentage of a prolific crop. Thinning is not sufficiently practised. Judicious thinning is so advantageous that it is worthy of inclusion in the operations of the keen and up-to-date grower.

Cultivation.—Orchardists need to bear in mind that this is a critical time for fruit trees, as they are forming blossom buds for the ensuing season, and if the soil has been allowed to harden or to form a surface crust with consequent loss of soil moisture by capillarity the trees are severely handicapped in their development of healthy, vigorous buds for next season. In order to grow fruit successfully—that is, to secure regular crops of good quality and in reasonable abundance—the needs of the tree must be supplied. One of the most important of these needs is soil moisture. It is not hard to keep a tree alive, for trees are wonderfully tenacious of life, but much more than that is necessary. The life must be vigorous and well sustained; then growth and general development will be satisfactory, foliage will be strong

and healthy, crops will be good and more regular. To secure these important results conserve moisture, keep the soil well tilled, feed the trees, prune skilfully, and practice necessary tree sanitation.

Individual Tree Records.—It is a matter worthy of serious consideration whether it is not worth while to keep records of the crops from individual trees. A grower should know which trees are really paying, and which trees are merely profitless cumberers of the soil. The average fruitgrower is accustomed to thinking of profits and of losses in terms of acres, regardless of the fact that, while the acre may return a profit, individual trees may represent a loss, and that the return from the acre could be increased if such trees were replaced. A change from the acre-unit as the basis of profit and loss calculations is both desirable and necessary.

To calculate and keep a record of the exact number of fruit or the exact weight of fruit from each tree would consume an inordinate period of time and would be impracticable. To the average orchardist, an estimate of the crop of each tree would be sufficient, as after a little practice growers would soon become proficient in estimating to a nicety the crop of any given tree. The work can be done expeditiously and accurately enough for all practical purposes. The six great factors which determine production are, inherent quality of tree, cultural operations, location, sanitation and manuring, and pruning.

N.S.W. FRUITGROWERS' FEDERATION.

A meeting of the Board was held at the Federation's offices on January 13,1928,there being but one absentee. General J. Heane in the chair.

Citrus for Tasmania.—The secretary reported that in regard to the restrictions imposed by Tasmania upon Citrus imported from N.S.W., after making representations the Tasmanian Government had agreed to admit the fruit without holding it in bond for three days, as has been the custom on the grounds that the fruit takes about three days to reach Tasmania. The Tasmanian Government also stated that every care would be taken in the future, when repacking any fruit that was opened for inspection.

Standard Case.—The question of a standard Commonwealth fruit case was again raised, and a committee was appointed to consider the case question with a view of reducing the number and variety of cases now in use.

Experimental Orchard at Orange.—A request from the Orange Producers' Rural Co-op. Society for support in the establishment of an experimental orchard at Orange was regarded as a matter for the particular district, but the Federation was prepared to support any proposal for the establishment of more experimental orchards.

Printed Wrappers.—Correspondence from the Chamber of Agriculture was read suggesting that all Australian fruit exported should be wrapped in printed wrapping paper showing the country of origin. It was decided to point out to the Chamber that all the Oranges exported were wrapped in "Kangaroo" brand wrappers; a number of Apple exporters were not using printed wraps. As the main exportation of Australian Apples to the English markets came from Tasmania, however, the small quantity from this State could have little influence on the matter.

Official Organ.—It was decided that the time was not opportune for the publication of an official journal.

Codlin Moth Regulations.—It was decided, after considerable discussion, to recommend to the Department that districts be exempt from the bandaging provisions of the Department if satisfied that moth is being effectively controlled, provided, however, that local orchard inspectors be empowered to order any grower in any exempted district to bandage if considered necessary.

Citrus Grading.—The Citrus Grading Regulations were discussed at some length, and it was decided to recommend to the Government certain amendments to be made, as follows:—(1) That "Special" grade be amended to allow of all the fruit in the grade to carry blemishes up to 5 per cent. of the total area of each individual fruit. (2) That "Factory" grade be amended by altering the name of "Factory" to "D."

Apple and Pear Grading.—Batlow submitted a proposal that the Federation should again endeavour to have the present Apple and Pear Grading Regulations reviewed and amended by the adoption of the proposed regulations approved by the Federation previously. This suggestion was adopted after a lengthy discussion. The proposals provided for an entire alteration of the grades which now allow for a larger percentage of infected fruit in each succeeding lower grade. The new proposals provide for all the fruit in each grade being of a lesser quality than the next preceding grade.

Advertising Fruit.—The president reported that he had secured a tentative agreement with the Railway Department to allow the Federation space on the Central Railway Station for the exhibition of advertising matter in regard to fruit, and was authorised to finalise arrangements.

Export of Citrus. — The Board agreed to endeavour to obtain assistance from the Federal Government in the form of a guarantee to growers against loss in the export of Citrus fruit to markets in the United Kingdom, until such time as the profitable export of Citrus was reasonably assured.

(Continued on page 23)

Here at Last!

PATERSON'S CONCENTRATED

"CLENSEL"

British Product.

Insecticide and Fungus Destroyer

The only combination Spray in the World.

The Spray that has achieved Remarkable Results throughout England and India.

Write for Particulars of Results of Tests by Australian Fruitgrowers.
Once Tried Always Used.

Eradicates on contact Red Spider, Scale, Thrips, Curly Leaf, Green Fly, Black Rot, Mildew, etc.

Non-poisonous. Non-injurious to trees or foliage.

"CLENSEL" can be used any time of the year.

Easily mixed. No other spraying solutions to be added. Badly infected orchards can be effectively cleaned with two applications of CLENSEL.

Further particulars from—

BRUCE ANDERSON——————CLENSEL (Aust.) AGENTS

56 Hardware Street, Melbourne

Commonwealth Research Station

Murrumbidgee Irrigation Area.

(By E. S. West, M.Sc., Officer in Charge of the Station, in the "Journal" of the Council for Scientific and Industrial Research.)

1. General.

The Commonwealth Research Station, Griffith, was officially opened on September 4, 1924, by Mr. Commissioner Evatt, of the Water Conservation and Irrigation Commission of New South Wales. It was established jointly by the Commission and the former Commonwealth Institute of Science and Industry, and for the purpose of studying irrigation problems. As first established, the station was controlled by a committee of three, consisting of a representative from each of the contributing bodies and a settlers' representative; and as it was intended at that stage to devote attention mainly to problems of the citrus industry, the station was established under the name of the Commonwealth Citrus Research Station.

With the re-organization of the Commonwealth Institute of Science and Industry, which resulted in the formation of the Council for Scientific and Industrial research, the control of the station was taken over by the latter, which has assumed full financial responsibility. The Water Conservation and Irrigation Commission of New South Wales still assists financially in the prosecution of the work by means of an annual subsidy. As it is not now intended to limit the scope of the work to Citrus investigations, the name of the station has been changed to the Commonwealth Research Station, Murrumbidgee Irrigation Areas. The station is centrally situated 3 miles from the town of Griffith, on the Murrumbidgee Irrigation Areas, New South Wales, and comprises 57 acres, of which 50 are irrigable. Other horticultural land is available for possible future extension, in addition to a large area suitable for rice investigations, should such be undertaken.

2. Original Field Experiments.

The original field experiments laid down were designed to yield information concerning the following problems, viz.:—

(i) The effect of different soil treatment on the structure, yielding capacity, and other properties of the soil.

(ii) The most profitable fertilizer treatment for Citrus fruit under local conditions.

(iii) The effect on soil and Citrus trees of various methods of green manuring.

(iv) Bud selection studies.

Experiments designed to elucidate these problems are embodied in the three main experimental fields mentioned in the sections that follow.

3. Soil Treatment Field (Field 100).

This field is designed for the study of the effect of various soil treatments on the fertility of the soil, and on the percolation of water through it.

Where irrigation is practiced the soil is called upon to absorb anything from 2 to 6 acre-inches per acre, or, at times, even greater amounts than this, during a single irrigation. Under dry conditions the soil seldom receives such large amounts of water, a fall of even 3 inches being phenomenal and leading to floods. It is only to be expected, then, that the large applications of water made under irrigation should create problems more or less foreign to the dry farmer, and it is these problems related to the soil which become the most important in irrigation areas. Improper use of water may lead to the creation of a high-water table, with the disastrous results illustrated in Fig. 1, which shows the limited root development of an orange tree growing in waterlogged soil. Trees with such a shallow root system as this inevitably die when mature, as the roots fail to cope with the transpiration demands of the green portions.

The Commonwealth Research Station, Murrumbidgee Irrigation Areas.

Fig. 1. — Restricted root development of an Orange tree resultant on a high-water table.

Prior to planting, Field 100 was poorly drained, and owing to the rather heavy texture of the soil semi-marsh conditions prevailed. It was therefore an excellent site for the proposed studies. It is now planted with Washington Navel orange trees, and is divided up into plots 1 chain wide, some of which have been deep-ploughed to a depth of 24 inches (sod turned), others deep-knifed to a depth of 24 inches (sod unturned), others dressed with applications of lime of from ½ to 4 tons per acre, and others dressed with applications of gypsum of from ½ to 4 tons per acre.

The field is divided into two divisions, plots of the above treatments occurring on each, but in addition tile drains are laid below the plots of one division, the other division remaining undrained.

Both lime and gypsum are well-known soil amendments, both floculating the clay fraction of soils, thus making the latter more pervious to water. The deep-knifing is equivalent to subsoiling, while the deep-ploughing brings up the lime, which is usually found at a depth of 18 in. in the soil (zone of deposition), and mixes it with the surface soil. This treatment is equivalent to a dressing of about 30 tons of limestone per acre, and it greatly improves the physical condition of the soil, particularly in the latter's permeability to water. It is found that deep-knifing and the application of gypsum also increases the permeability of the soil to water, but the deep-knifing does not appear to be so permanent in its effect as the deep-ploughing. Very little effect from liming has been noted on this soil.

In order to study the effect of these treatments on the percolation of

water through the soil, a comprehensive series of "test wells," which consist essentially of lengths of perforated downpipe 6 ft. long and 2 in. in diameter, introduced into the soil, have been constructed over the field. These "test wells" are placed 22 ft. apart in rows 66 ft. apart, running across the lines of tile drains, and the height of the water in them, measured by a graduated wooden rod, indicates the depth to the saturated soil.

Fig. 2 illustrates the way in which the fall of the water table in the soil is affected by the tile drains. as shown by data obtained from this source. A self-registering test well has also been installed which, by means of a float and recording mechanism, continually records the height of the water table. By means of a barograph it can readily be demonstrated that with a fall in the atmospheric pressure the water table rises, and vice versa.

In order to study further the downward movement of the water through the soil after irrigation, concrete-lined wells have been sunk in two different localities on the station. At successive depths brass tubes pass through the concrete, and a length of glass tubing bent up at right angles is introduced into each brass tube. If any free water is present in the soil, water will rise in the tube, the height of the water corresponding to its hydrostatic pressure. In this way, a method is afforded of studying the downward percolation of the waves of saturation created by irrigations. It is important to know how far water percolates through the soil, as if too little is added it will not wet the soil to the full root zone, while on the other hand excessive applications lead to the percolation of water beyond the root zone, which not only represents a waste, but may result in the menace of a high water table.

Studies on this field have shown that it is possible for the water table in certain localities on the Murrumbidgee areas to rise from great depths to the surface, and that after but a comparatively few years of improper irrigation. It is not meant by this that there is a likelihood of the water table rising over large areas; but there are areas of five to ten or more acres where the water table has already risen to the surface, creating serious local problems.

(To be Continued.)

A FAR-SEEING LEADER.

A good man's influence goes marching on.

G. Harold Powell, of California.

Not only did the late G. Harold Powell do a man's job in building up the California "Sunkist" Fruitgrowers' Exchange, but he was one of the best workers in establishing the Citrus Experiment station at Riverside, Southern California, an institution which is doing a power of good for the industry. He was a practical, far-seeing man, who, in the midst of duties for "to-day" did not forget there was a "to-morrow," so he laboured for the present and the future. The influence of this good man will live for ever.

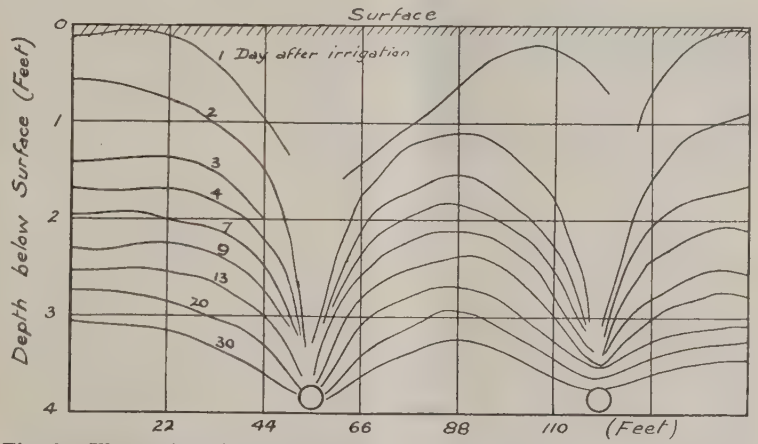


Fig. 2.—Illustrating the effect of tile drains on the water table. The figure represents a vertical section, the circl es indicating the positions of the drains, and the curves the positions of the water table at a number of different days after irrigation.

FOR

SPRAYING, LIMEWASHING and DISINFECTING

RELIABLE AND EFFICIENT MACHINES ARE ESSENTIAL

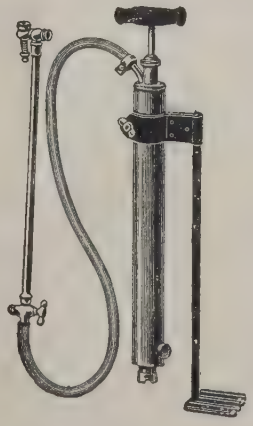
Before Placing Your Order ASK A FRIEND

WHO HAS USED A

VERMOREL "ECLAIR" SPRAYER

TO TELL YOU HIS OPINION OF IT

ACTUAL USE IS THE BEST TEST



The types made include the following:—

HAND SPRAYERS
PNEUMATIC HAND SPRAYERS
KNAPSACK SPRAYERS
PNEUMATIC KNAPSACK SPRAYERS
BUCKET PUMPS
BUCKET SPRAYERS
SINGLE WHEELED SPRAYERS
TWO WHEELED HAND POWER SPRAYER
high pressure model (220 lbs. per square inch)
CART SPRAYERS
AUTOMATIC HORSE DRAWN SPRAYERS
POWDER BELLOWS
KNAPSACK POWDER SPRAYERS
AUTOMATIC HORSE DRAWN POWDER SPRAYERS
3 H.P. MOTOR SPRAY OUTFITS

LIQUID CAPACITIES 1¼ pints to 88 gallons. PRICES FROM 2/9 to £80 each

The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants.

Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—

COOPER, PEGLER & CO. LTD., 244 CHRISTOPHER STREET, LONDON, E.C.2.

Cool Stores Conference.

Undersized Fruit Cases. ∴ News and Notes.

COOL STORES' ENGINEERS' CONFERENCE.

THE FIRST CONFERENCE of the Engineers and Secretaries of the Fruitgrowers' Cool Stores Association of Victoria was held at Box Hill on January 10, 17 stores being represented. Mr. J. Tully presided, and instructive papers on various cool storage problems were read by Messrs. R. Sutherland (Orchardists), and A. Powell (Blackburn), and thoroughly discussed.

SULCAR
CARBONISED SULPHUR
Spraying Mixture.
THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED
DOES NOT BURN.
Manufactured by
SINCLAIR & Co.
BOX 3, KING ST., P.O.-SYDNEY.
(Works,-Alexandria)

COVENT GARDEN, LONDON
Ridley, Houlding & CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.,
Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

Mr. A. Croft (Harcourt) urged the use of purer ammonia, and illustrated an ammonia purifier now being installed at Harcourt. This, he stated, cost practically nothing to run, and meant greater efficiency in the plant.

Mr. J. Hepburn (Government Cool Store) stressed the desirability of the Engineers getting together to discuss their various problems, also urging that the scientists might be asked to assist. The speaker pointed out that, while at times refrigeration was expected to do the almost impossible, it was taking its place in the development of all primary industries, and by holding our food supplies in good condition, not only contributed largely to the general health of the nation, but stabilised markets for primary products, thereby adding to our national prosperity.

The desirability of continuing and extending the scope of the conference was keenly discussed, the unanimous opinion being that much useful work could be accomplished if the time allotted for discussions were extended. It was decided that the conference be held annually; that at the next conference morning, afternoon, and evening sessions be held; the next conference to be held in the city early in January.

Mr. J. W. Barrett presented a graph showing the relative fuel and working costs of the various cool stores worked out on a capacity-hour basis, in addition to H.P. hour basis, the capacity-hour being a much fairer basis of comparison. A vote of thanks was tendered to Mr. Barrett for this useful information.

A large number of questions were discussed, and keen interest was taken in the proceedings.

This first conference of Fruit Cool Store Engineers marks another step forward in the advancement of the Fruitgrowers' Cool Stores Association. The spirit in which those present entered into the proceedings pointed to much good and mutual help being gained from these meetings. If engineers will make a note of any difficulties that occur in the course of the season's run, and send them along for discussion, they will not only be helping themselves, but perhaps help a brother engineer who may at some future date be faced with the same difficulty.

(Mr. Powell's address is printed elsewhere in this issue; Mr. Sutherland's paper will appear later.)

FRESH PEACHES FOR CITY DWELLERS.

The Peach crop is very heavy this season, and there is talk of a glut in the fresh fruit market—everyone is being urged to "Eat More Peaches" and keep fit.

The methods adopted by Messrs. Clayton Bros., of Kyabram, Victoria, for placing their fruit right before the consumers, seem highly satisfactory. Neat cardboard boxes are attractively packed with a single layer of a dozen or so Peaches (according to size—perhaps not more than 6 or 8 of the very large late sorts), nestling in beds of tissue paper. On the boxes are conspicuously printed the words: "Choice Fruit, from Clayton Bros., Kyabram." The Peaches are retailed at a flat rate of 1/6 a box by the various city seed and plant shops, who are paid a small commission on their sales. Unsold fruit is collected and returned to the growers by their agent.

UNDERSIZED FRUIT CASES.

The Horticultural Superintendent (Mr. J. M. Ward) desires to inform fruitgrowers and makers of fruit cases and berry punnets that a number of undersized fruit cases and berry punnets are being placed upon the various markets in Victoria, particularly the Melbourne markets. In some instances the cases are one inch less in width than is allowed by the law.

Growers and others are therefore warned that action will be taken in accordance with the regulations under the Fruit Act against offenders.

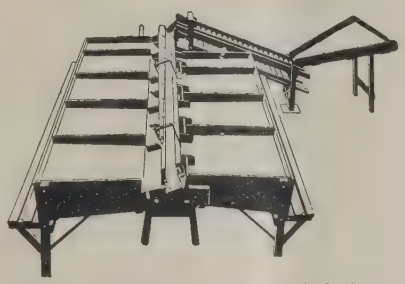
The following are the sizes of fruit containers required by the law:—

Name of Case.	Inside Dimensions, clear of all Divisions—Inches.
Bushel Case	18 long x 14½ deep x 8-2/3rds wide
„ „	26 „ x 14½ „ x 6 „
„ „	20 „ x 10 „ x 11-1/8th „
One Half-bushel Case	18 „ x 7⅛ „ x 8-2/3rd „
„ „ „ „	26 „ x 7⅛ „ x 6 „
„ „ „ „	18 „ x 5¼ „ x 11⅜ „
One Quarter-bushel Gin Case	13⅜ „ x 4 „ x 10-1/8th „
Tropical Fruit Case	24⅜ „ x 12 „ x 12 „
Citrus Case	23 „ x 11½ „ x 11½ „
Grape Case (28 lb.)	22½ „ x 13½ „ x 7 „
Grape Case (25 lb.)	26½ „ x 13½ „ x 5 „
Grape Case	24 „ x 11⅜ „ x 6 „
Apricot, Peach	18 „ x 3¼ „ x 14¼ „
Pears and Plum Tray	18 „ x 2⅞ „ x 14¼ „
„ „ „ „	18 „ x 2½ „ x 14¼ „
Strawberry Punnet	Width at top 4½, width at bottom 4, depth 2⅜ inches.
Raspberry Punnet	Width at top 4½, width at bottom 4, depth 2¼ inches.
Bucket	Two imperial gallons or cubic contents of 554-2/5ths cubic inches,

Growers and others are therefore warned that action will be taken in accordance with the regulations under the Fruit Act against offenders.

The following are the sizes of fruit containers required by the law:—

"To choose the best is Wisdom"



Model 10 with Elevator Conveyor attached. Spring Floor Bin on each side of the machine. Each Bin will hold up to 3 bushel cases of fruit

300% INCREASE

A Grower using a "Lightning" Fruit Grader says his daily output has increased by 3 to 1

JUST THINK OF IT

He now Packs 300 cases in the time he used to take to pack 100 cases. ARE WE NOT JUSTIFIED in saying that you CANNOT AFFORD to be any longer without a

LIGHTNING FRUIT GRADER

WRITE FOR A COPY

Our new Catalog No. 5, just issued contains several models which you have not hitherto seen. YOU WILL BE INTERESTED.

All Lightning Models are equally suitable for **APPLES, PEARS, PEACHES etc.**

We also supply **Gravity Conveyors, Nailing down Presses, Packing Stools** and the latest and most successful **Paper Holders etc.**

LIGHTNING FRUIT GRADER CO. 5 HODDLE STREET, COLLINGWOOD MELBOURNE, VIC.

Cable and Telegraphic Address: "Lightning," Melbourne

The fruit sells freely, having a bloom and freshness which is often lost in the journey through ordinary market channels. The boxed Peaches also make attractive gifts. The enterprise of this firm deserves all success.

Arrangements are in hand for conducting "Peach Week" in Melbourne.

FRESH GRAPES IN VICTORIA.

Marketing System Operating from Mildura.

The Mildura and District Grape Growers' Association, with Mr. H. R. Paton as Secretary, has organised the distribution of fresh grapes to various country centres. The Railway Department is earnestly co-operating. The Association embraces growers in Mildura, Red Cliffs, Merbein, Irymple, and thereabouts.

WHERE AMERICA LEADS.

In four ways the fruit industry in the United States is ahead of Australia, thus—scientific research, organization, standardisation, and advertising—California, by an intensive advertising campaign, has favorably altered the dietetic habits of the American nation.

A NOTE ON SOIL MANAGEMENT,

Prompted by Reading Mr. Jas. H. Lang's paper published in the "Fruit World" of November, 1927.

(To the Editor.)

Sir,—

Mr. Lang's paper prompts me to add a few remarks based not upon scientific data to any great extent, but upon personal observations. Let me first say that soil fertility at the expense of the profit and loss account is useless. Orchardists must go in for costing and work upon a practical as well as a scientific scheme. Each man must know what it costs to produce an acre of fruit and the margin between production cost and cash return. He must be able to further analyse these figures to cost and margin per variety.

Armed with these figures he is in a position to intelligently tackle the problem of reducing the overhead expenses and increasing the earnings per variety.

Mr. Lang sets out very interestingly the general lines of action, but each orchardist must remember what is agriculturally called the **Law of Minimum**, which briefly is:—

"That the yield of a crop depends upon the available supply of that essential element of plant food that is present in least amount."

To my mind the average man on the land is guided by advertising generalities which, whilst no doubt they are quite honest, may have no bearing under his particular set of circumstances.

A farmer in South Australia cannot expect to get the same results with his crop as a man in Queensland, who states that he got a 100 per cent. increase by using a certain fertiliser.

We do not manure to grow a crop but to furnish some plant food that is either non-existant or deficient. Before spending money on fertilisers, soil analysis must be made, soil depths tested and subsoil examined. Analysis will disclose the plant foods available, and in co-operation with your nearest agricultural inspector, a worthwhile manuring programme can be evolved, and what money is spent, spent well.

Again, another agricultural law, that of diminishing returns, must be considered. Popularly expressed, this law is to the effect that as one increases the dose, one does not get a proportionate increase in the yield. If an increase of 5 cwt. per acre is got by a dressing of 10 cwt. of fertiliser, an increase of 10 cwt. cannot be expected with a 20 cwt. dressing. Let each agriculturist be guided by the requirements of his own soil, and manuring will become a profitable outlay, with ever increasing productivity.

D. McEWEN.

Miller's Flat, Otago, New Zealand.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.

Andrew, Fred J., 416 Lit. Collins St.
Colombie, H. G., Temple Court.
Cave, F., & Co., Melbourne.
Davis, J., Western Market.
Dennys, Lascelles Ltd., Temple Court, Melbourne.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
Mills, J. B., & Co., Bank House, Bank Place Melbourne.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, 325 Collins St., Melb.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Piesse & Co., C.

Launceston.

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.

Dennis & Cooper Ltd., Covent Garden.
M. Isaacs & Sons Ltd.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salters Hall Court, Spitalfields Market, E.1.

Liverpool.

MacGeorge & Jardine.

Hull.

Shaw, B. & J. also Newcastle).
White & Son Ltd.

Bristol & Southampton.

Bristol Fruit Brokers Ltd.

Cardiff, Belfast & Dublin.

Connelly, Shaw & Co.

Glasgow.

Russell, Turnbull & Co.

Manchester.

Manchester Fruit Brokers Ltd.
The Port of Manchester, rep., W. J. Wade, 8 Bridge Street. Sydney.

GERMANY.

Bremen.

Fruchthandel, Gesellschaft.

Hamburg.

Astheimer, P. H., & Son, Fruchthof.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.
Algemeene Vruchten Import Maatschappy (also Cologne).

HOLLAND.

Amsterdam & Rotterdam.

Algemeene Vruchten Import Maatschappy.

DENMARK.

Copenhagen.

Kobenhaons Fugtauktioner.

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England and the Continent.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

ENGLISH MARKETS.

Our London Representative, Mr. Harvey H. Mason, writing from London on December 13, writes:—"The year is closing with depressed markets for all fruits and vegetables, but there are indications of an improvement in general trade which we are all hoping will be reflected early in the New Year, by much better conditions than prevail at present. It is the aftermath of last year's coal strike and general strike, from which we are now suffering."

AMERICAN APPLE SALES.

Liverpool (14/12/27).

Messrs. J. C. Houghton & Co., Liverpool, report as follows:—

American Box Apples.—With the exception of Newtowns there is not much change of any practical nature, but the sentiment of the market is undoubtedly less gloomy than of late, and sales are made more freely, though still at prices which can provide nothing but loss. An important parcel of Spitz direct from the Pacific Coast arrived in disappointing condition, and had to be marketed promptly at figures much below those which the quality of the fruit deserved.

Oregon and Washington — Newtown, 10/9, 18/-; Jonathan, 7/9, 12/6; Winesap, 8/6, 12/6; Spitzenberg, 6/6, 11/6.

Californian—Newtown, 4 tier, 11/3, 11/6.

British Columbia.—Very few available, of low grade and by no means free from defect. Jonathan, 6/6, 7/6.

Pears, American.—A handful only on the market, with values very much the same as before. Keiffers in barrels are selling badly, but this is due to the inferiority of much of the fruit itself.

American—Kieffer, barrel, 9/-, 17/-.

Oregon—Anjou, box, 21/-, 23/6; W. Nelis, 18/6, 20/-.

Canadian official reports on December 19 stated that the market for both barrelled and boxed Apples was unsatisfactory. Prices for boxes ranged from about 7/– to 14/3, and odd lots of extra fancy at 18/6. The quantities of Canadian Apples held in cool storage on December 15 were about half those at a similar period in 1926.

GERMAN MARKETS.

Hamburg (8/12/27).

Messrs. Ph. Astheimer & Son report:—Sales comprised 37,377 boxes and 5,612 barrels of American Apples.

Boxed Apples.—Arrivals were far larger than anybody expected one month ago; the New York market having been shipping quite unexpectedly boxed Apples in large quantities during the last few weeks. It is therefore very gratifying for us to report that all offerings, as far as fruit of good quality and of good condition was concerned, were taken at satisfactory prices. Winesaps were wanted for long distance shipments, and the Jonathans — if hard and sound—were eagerly competed for by buyers from nearby points. Of course, Jonathans in puffy and wasty condition had to be sold at a loss, but this not being the fault of the market. Rome Beauties if of good colour met with strong demand, but much to our regret we have to report that most of the arrivals of Rome Beauties are lacking colour this season, which naturally prejudiced prices. Sound Spitzenbergs were wanted, but large lots from Oregon arrived in poor condition, and such fruit had to be sold at from 7/- to 10/-.

AUSTRALASIAN MARKETS.

New South Wales.

Sydney (17/1/28).

Mr. F. Chilton, City Fruit Markets, reports:—

Queensland Fruits.—Bananas, 12/– to 26/– per case; Pines, Smoothleaf, 9/- to 13/-; Papaws, 10/- to 16/-.

N.S.W. Fruits.—Bananas, 14/– to 28/- per case; Lemons, 6/- to 15/- per bus. case; Oranges, Valencia, 8/– to 16/- per bus. case; Apricots, 4/- to 6/– per ½ case; Plums, 2/– to 8/–; Plums, extra choice dessert, 10/– to 15/-; Peaches, 2/- to 6/-; Nectarines, 2/6 to 7/–; Grapes, Black Hamburg, 14/– to 18/–; Passions, 4/– to 9/-; Tomatoes, 5/- to 8/–; Eating Apples, Gravensteins, 7/- to 12/- per bus. case; Cooking Apples, large green varieties, 4/– to 8/–; Pears, Williams, 7/- to 10/-; Cucumbers, 3/- to 4/–.

Tasmanian Fruits.—Apricots, 3/– to 6/6 per ½ case.

Victorian Fruits.—Pears, Williams, 8/- to 10/- per bus. case; Apples, William's Favourite, 6/- to 8/-; Peaches, 4/– to 8/–; Nectarines, 5/– to 9/–.

The Sydney market at present is overstocked with most kinds of summer fruits, and the demand generally is dull except for best qualities in best condition.

New season's Apples and Pears are now coming forward, but there is no demand for small or inferior lines.

Queensland Pineapples are showing signs of Water Blister. Growers are advised to exercise the utmost care to avoid this trouble.

QUEENSLAND.

Brisbane (18/1/28).

Apples, Stanthorpe, 7/- to 12/-; cooking, 6/- to 8/-; inferior, 3/- to 5/– bus. case; Lemons, 7/– to 9/– ½ bus. case; Pineapples, rough, 2/– to 5/– doz., 5/– to 9/– case, smooth, 2/– to 7/– doz.; 4/6 to 8/6 case; Papaws, 1/– to 5/– case; Passion Fruit, 2/6 to 7/–; Peaches, 2/– to 6/– ½-case; specials, 8/– to 9/–; Plums, 1/6 to 8/–; specials, 9/– to 10/–; Apricots, Stanthorpe, 3/– to 9/–; Grapes, white, 3d. to 3½d. lb., black 2½d. to 3½d., specials, 4d.; Nectarines, 4/– to 6/– ½-case; Pears, 5/– to 7/– ½-bus. case.

SOUTH AUSTRALIA.

Adelaide (21/1/28).

Apples (eating), 5/– per case; (cooking), 4/–; Apricots, 12/–; Bananas (Queensland), 30/– to 32/– per case; Blackberries, 4/– to 5/– per doz. lb.; Grapes (dark), 5/– ½-case; (white), 6/– ½-case; Lemons, 20/– to 24/– per case; Nectarines, 12/– to 14/-; Oranges, 20/-; Passion Fruit, 30/–; Peaches, 7/– to 8/–; Pears (eating), 8/– to 10/–; cooking, 6/–; Pineapples, 25/; Plums, light, 5/– to 6/–; Damson, 10/–; Strawberries, 1/– per lb.; Raspberries, 6/6 per doz lb.

WESTERN AUSTRALIA.

Perth (14/1/28).

Apples, new season's, flats 6/– to 10/6 (others from 3/–); dumps, 9/– to 14/–; Pears, flats 4/– to 9/–; Valencias, flats 10/– to 15/– (special to 18/–); dumps 15/ to 19/–; Lemons, flats 6/– to 12/– (special to 15/–, others from 3/–); Apricots, flats 9/– to 14/6 (special to 17/–, others from 5/–); Peaches, flats 10/– to 15/– (special to 20/–, some from 7/–); Grapes, open 8/– to 11/– (special to 16/–); Nectarines, flats 9/– to 15/– (special to 19/–, some from 5/6); Strawberries, 14/ to 15/– per doz. punnets; Passion Fruit, flats 7/– to 7/6 (special to 12/6); Plums, flats, Burbanks 3/– to 9/– (special to 10/); Satsumas, 7/– to 11/– (special to 15/–, others from 5/–); Climax 6/– to 12/– (special to 15/–); Black Diamond, 8/- to 12/- (special to 16/-); Wicksens, 5/– to 9/6 (special to 13/–, others from 3/–); Prunes 9/– to 14/–.

TASMANIA.

Hobart (14/1/28).

Florence Cherries (half cases), best 17/6 to 20/–, good to fair, 13/– to

15/–, soft and pale colored 8/– to 10/6, Kentish 5/- to 6/-, Bigarreau 8/– to 10/3, Marguerites 17/– to 18/–; Apples, Beauty Bath, best 9/– to 10/–, others 5/– to 8/–, P.A. 6/– to 6/6, M.C. 3/6 to 5/–, Gravensteins 5/– to 7/6, other sorts 4/ to 6/–; Plums (dark), 2/6 to 3/6 ½-case, others (light), 3/– to 3/6; Apricots, 3/6 to 4/- best, medium 4/- to 5/- per case; Peaches, best 6/- to 6/6 ½ case, medium and over-ripe, 2/6 to 3/6 per ½ case.

VICTORIA.

Melbourne (21/1/28).

Wholesale quotations are as follow, per case:—Apples, Grevenstein 8/– to 10/–; Williams' Favorites, 4/– to 5/6; others, 2/6 to 5/–. Apricots, choice dessert, 6/- to 8/-; medium, 4/– to 5/–. Bananas, special, 24/– to 28/–; choice, 16/– to 22/–; standard, 10/- to 13/-; Grapes, Rasin des Dames, 12/- to 15/-; Chasselas, 7/- to 9/-; Lemons, Vic., 18/- to 24/-; Cantaloupes, 10/- to 11/-. Oranges, Vic., 14/- to 22/-. Passion Fruit, N.S.W., 8/- to 12/- per ½ case. Peaches, dessert, 6/- to 8/-; medium, 3/- to 5/-; canning, 4/- to 5/-. Pears, W.B.C., 5/– to 8/–. Plums, 4/6 to 6/–. Pineapples, Queens, 16/– to 18/–; roughs, 11/– to 13/–. Tomatoes, 4/– to 10/–; special, to 12/–; others from 2/6. Cucumbers, 6/– to 8/–.

NEW ZEALAND.

Dunedin (13/1/28).

Messrs. Reilly's Central Produce Mart. Ltd. report:—Fruits are now coming forward in full supply. Lemons are scarce, and Americans are selling to arrive at 62/6. American Navel Oranges are realising 42/6.

Crate Peaches.—Choice are realising from 5d. to 7d., and Newcastle and Oullin's Early Apricots the same money.

Cherry Plums. — Extra choice are making 4d. Local Grapes are realising 2/3 to 2/5. Tomatoes are still coming to hand freely, prices range from 9d. to 1/2.

Our first consignment of Gravenstein Apples from the Blenheim district realised from 14/6 to 17/9, and Emperor Alexandra 9/– to 11/3. Honey Pears 18/– per case.

"BRITISH FRUIT MARKETS."

With reference to a report in the December "Fruit World," stating that in 1922 nearly 2,000,000 cases of Apples, Pears, Grapes and Oranges were imported (into London) from Australia, Tasmania and New Zealand, in addition to large quantities from Canada and South Africa, Captain W. J. Wade, representing the Port of Manchester, writes stating that 25 per cent. of these importations go to the provinces without touching the London markets; nearly 65,000 tons of imported fruit are sent by rail to provincial centres from Covent Garden alone. As London cannot economically distribute all the fruit sent there, producers in Australia would save money by adopting a policy of decentralisation, and Manchester as a distributing port warrants attention.

MANCHESTER FRUIT TONNAGE.

(To the Editor, "Fruit World.")

Sir,—

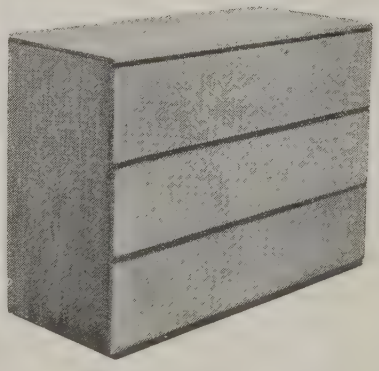
The position in regard to direct tonnage for fruit destined for Manchester is not satisfactory at the time of writing, but may improve later.

Permit me to thank growers and shippers who have intimated their desire to ship to Manchester during the coming export season, and to advise them to continue pressing the steamship agents concerned to put on tonnage in accordance with their requirements, viz., **to Manchester direct.**

The undersigned would appreciate particulars of cases where difficulty is experienced in shipping fruit to the great inland port and market of the North—either direct or on "Through Bills"—and will do everything possible to assist exporters in this connection.—Yours faithfully,

Wm. Jno. WADE,
Representative, Manchester Ship Canal Co.

Softwood Pine Cases



Some Advantages in Favor of Imported Cases

1. Less weight to handle.
2. Quicker to cart to boat or rail, as 10 per cent. additional boxes can be loaded, due to box weighing only seven pounds.
3. Softwood shooks being less than half the weight of hardwood, they can be carted in a much shorter period.
4. All timber cut to exact sizes, making it an easy matter to assemble a symmetrical case.
5. Every piece of timber fit and ready for use, thereby eliminating waste.
6. Better returns to the growers.
7. Much less bruising of fruit in transit.

C. H. TUTTON PTY. LTD.

Royal Exchange Buildings - - 40 Queen Street, Melbourne

Phone : F 3837 *Telegrams & Cables : "Tutbox," Melbourn*

Queensland

Current News and Items of Interest :: Orchard Work Notes by our Correspondent

Effects of the Rains.

FOR THE PAST three months the southern part of the State has been favoured by generous rainfall—to excess in some parts—where the frequency of showers has impeded cultural operations and favored the development of weed growth. Injurious fungi have found conditions congenial, and their effect has been rather pronounced on tomatoes, melons, cucumbers, etc. Grapes have been kept reasonably free from mildew, but the excess of moisture is responsible for depreciation in quality, and a most appreciable reduction of the average sugar content. Temperate fruits, although not so subject to the excess of moisture present on the coast, are more or less influenced in flavour, which is deficient, though size and appearance are above the average.

Amongst tropical fruits Bananas have profited very materially, and abundant growth is manifested throughout. As a robust growth is invariably followed by presentable fruit there is every prospect of a much-desired improvement in quality resulting. Very heavy planting has been done this season, and it is questionable if all of the land under this crop is adapted for the purpose. Unfortunately, this applies to many other fruit crops—particularly Citrus.

In the north, Banana culture is being gradually taken up, and though ample areas of suitable land are available, there is evidence of inclination to combine this line with sugar-growing—a practice that has nothing to commend it.

Sugar-Growing and the Foreign Element.

In a modest survey of the northern sugar industry one is led to ask if the heavy duty on imports is for the benefit of the Commonwealth generally, or more especially to provide large landholders with unduly increased wealth, and a most motley assortment of foreigners with lucrative employment, the proceeds of which are largely absorbed in the provision of liquid refreshment.

The extent to which the foreign element has invaded the sugar industry may be gauged by the fact that during the recent illegal strike at South Johnstone Mill (when some 250 assorted dagoes and sundries were responsible for holding up the entire railways of the State), the award entailed six interpreters to make it intelligible to their individual comprehension. The association of sugar with the fruit industry is considered sufficient excuse for introducing this aspect.

A New Agricultural Board.

The principal features of the fruit industry, as well as those of agricultural economics covering a wide range, will, it is reported, be mainly controlled by a board, the personnel of which includes representatives of the principal activities—a change from departmental administration which will be welcomed by all concerned. The fallacy of clerical heads with little or no appreciation being responsible for accepting or declining the recommendations of experts in their calling has far too long prevailed, and the results are apparent on every hand—more particularly in the fruit industry.

Under the new regime some results may be expected from recent legislation, particularly in respect of primary products. Provision is made for the establishment of experimental areas or farms for such varieties as may be divided—the maintenance (also establishment) being a charge on the industry concerned, subsidised up to £1 for £1 by the Government. Bananas have been the first to receive consideration and growers' representatives have already conferred with the Minister, and agreed upon the establishment of a Banana farm under conditions to be decided in the near future.

One feature reported is not commendable—that the experiments (covering all aspects) be conducted on average Banana land. There is only one class of land from which satisfactory returns can be maintained—the best. That this is not generally recognised is mainly responsible for the poor quality of the fruit generally sold in Brisbane shops—and likely to so continue. The bunchy-top scare is being gradually reduced, and under effective methods could be eliminated within a reasonable time, but red tape controls the situation, and its unravelling by field officials under a system of perpetual irritation from its origin is a tardy and unprofitable attempt. Without the punch applied by Professor Goddard it is very questionable whether it would have received any consideration at all.

ORCHARD NOTES FOR FEBRUARY.

The Coastal Districts.

FEBRUARY in coastal Queensland is frequently a wet month, and, as the air is often heavy with moisture and very oppressive, plant growth of all kinds is rampant, and orchards and plantations are apt to get somewhat out of hand, as it is not always possible to keep weed growth in check by means of cultivation. At the same time, the excessive growth provides a large quantity of organic matter which, when it rots, tends to keep up the supply of humus in the soil, so that, although the property looks unkempt, the fruit-producing trees and plants are not suffering, and the land is eventually

Irrigation Hose in heavy Finest Scotch Duck

	A	B	C
3-inch	5d.	6d.	7d. per foot.
4-inch.	6d.	7d.	8d. „ „
5½-inch	7½d.	9d.	10d. „ „
7-inch	10d.	12d.	13d. „ „
9-inch	14d.	17d.	18d. „ „
11-inch	16d.	18d.	19d. „ „

HAY STACK COVERS

For Hay and Lucerne Stacks, etc.

	3-Star.	4-Star.
12 x 20	£2 3 0	£3 1 6
12 x 24	2 13 6	3 15 0
18 x 20	3 15 0	4 11 0
18 x 24	4 2 6	5 9 0
18 x 30	5 2 0	6 15 0
21 x 30	5 17 6	7 17 6

We can supply these covers in any length, 3 ft., 6 ft, and 9 ft. wide, suitable for covering drying racks.

Any other size at same rates. Ropes, 3/6 Extra.

Verandah Blinds, Window Blinds, Duck Tarpaulins, Tents, Camp Stretchers and all Classes of Canvas Goods.

Large Stocks of First-class Secondhand Sacks.

Please write for prices and samples.

WYETT MFG. CO. PTY. LTD.

21-23 BELLARINE STREET, GEELONG, VICTORIA.

'Phone 1688.

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—
Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.
Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

benefited. When the weed growth is excessive and there is a danger of the weeds seeding, it is a good plan to cut down the growth with a fern hook or brush scythe and allow it to remain on the ground and rot, as it will thereby prevent the soil from washing, and when the land is worked by horse power or chipped by hand it will be turned into the soil. This is about the most satisfactory way of dealing with excessive weed growth, especially in Banana plantations, many of which are worked entirely by hand.

The main crop of smooth leaf **Pineapples** will be ready for canning, and great care must be taken to see that the fruit is sent from the plantation to the cannery with the least possible delay, and in the best possible condition. The only way in which the canners can build up a reputation for Queensland canned Pineapples is for them to turn out nothing but a high-class article. To do this they must have good fruit, fresh, and in the best of condition.

The fruit should be about half-colored, the flesh yellowish, not white, of good flavor, and the juice high in sugar content. Over-ripe fruit and under-ripe fruit are unfit for canning, as the former has lost its flavor and has become "winey," while the latter is deficient in color, flavor, and sugar content.

For the 30 or 32 oz. can, fruit of not less than 5 in. in diameter is required, in order that the slices will fit the can; but smaller fruit, that must not be less than 4 in. or, better still, 4¼ in. in diameter, and cylindrical, not tapering, can be used for the 20-22 oz. can.

Bananas for shipment to the Southern States should on no account be allowed to become over-ripe before the bunches are cut; at the same time, the individual fruit should be well filled and not partly developed. If the fruit is over-ripe it will not carry well, and is apt to reach its destination in an unsaleable condition.

Citrus orchards require careful attention, as there is frequently a heavy growth of water shoots, especially in trees that have recently been thinned out, and these must be removed. Where there are facilities for cyanidings, this is a good time to carry out the work, as fruit treated now will keep clean and free from scales till it is ready to market. Citrus trees can be planted now where the land has been properly prepared, and it is also a good time to plant most kinds of tropical fruit trees, as they transplant well at this period of the year.

A few **late Grapes** and **Mangoes** will ripen during the month and, in respect to the latter, it is very important to see that no fly-infested fruit is allowed to lie on the ground, but that it is gathered regularly and destroyed. Unless this is done, there is every probability of the early Citrus fruits being attacked by flies bred out from the infested Mangoes.

Strawberries may be planted towards the end of the month, and, if early-ripening fruit is desired, care must be taken to select the first runners from the parent plants, as these will fruit quicker than those formed later. The land for Strawberries should be brought into a state of thorough tilth by being well and deeply worked. If available, a good dressing of well-rotted farmyard manure should be given, as well as a complete commercial fertiliser, as Strawberries require plenty of food and pay well for extra care and attention.—"Queensland Agricultural Journal."

PERSONAL.

Mr. J. B. Henderson, Assistant Instructor in Fruit Culture in the Queensland Department of Agriculture, has retired from the service on reaching the age limit. Mr. Henderson joined the Department in 1897 as Manager of the Experimental Orchard, then situated at Ridland Bay. Later he served at Cairns, and since 1909 at Stanthorpe, where his wide knowledge and strong personality have helped greatly in the development of the fruitgrowing industry in the Granite Belt.

MELBOURNE DAILY MARKETS.

The Victoria Market, Melbourne, is now open daily, instead of three days a week as previously. Growers who were on the "waiting list" for stands can now be accommodated. The indications are that the new arrangement will work satisfactorily.

The Metropolitan Fruitgrowers' Association has, in conjunction with the Housewives' Association, opened a kerb market at Ivanhoe, corner of Main-street and Ivanhoe Parade. The market is open every Saturday, from 6 a.m. to 12 noon.

SYDNEY:

Fruit Merchants

S. & M. Greenberg

No. 1 Store
Fruit Markets, Sydney
Also at Melbourne Markets

Tasmanian Shipping No. 161.
Victorian Shipping No. 42.

PROMPT RETURNS

Classified Advertisements

Wanted and For Sale.

Casual Advertisements, one to six words, **2d.** per word. **Contract Advertisements**, twelve months, **1½d.** per word.

"Excelsior" Fruit Grader, 4-race, large bins, in perfect order, nearly new.

Particulars—
SUNSHINE CO.,
Middleton, Tasmania.

First-class **PACKER WANTED.** Apple Export 360 c/s week off grader into Canadian cases; 11 to 12 weeks work at £4/10/–; board and lodging. Send refs. to
"P," C/o Fruit World,
Bank Place, Melbourne.

SIX IMPLEMENTS IN ONE

ONE WAY DISC : SPRING TYNE CULTIVATOR
TWO WAY DISC : LIGHT 3 FURROW PLOUGH
CUTTING RAKE : : IRRIGATION FURROWER

Reversible to throw to or from the trees. Made in various sizes. Send for particulars

SIMPLE TO OPERATE

LEAVES THE LAND PERFECTLY LEVEL

We Manufacture a Full Range of Special Tractor Orchard Implements

Write for Catalogue, stating either Tractor or Horse Drawn Implements

D. HARVEY, ORCHARD IMPLEMENT MAKER
BOX HILL, MELBOURNE, AUST.

SHOW ROOMS, 440 ELIZABETH STREET, MELBOURNE

AGENTS ALL STATES.

Egg production is not assured by *ordinary* food

EVERY hen, when hatched, has in her body the "seeds" of something like 2,000 eggs. That is to say, that when she reaches maturity she has within her the latent power to lay that number of eggs. To realise the highest profit from your fowls means ripening those "seeds" into large, well-formed eggs. The ordinary food, no matter how plentiful, will not do this.

What is needed is a tonic food, which acts directly on the nerves controlling the egg "seeds," and which will coax, not force, the bird to lay. In this way you can develop the latent power to such an extent that the maximum results will be obtained. Without such a tonic food, a fowl's system will absorb a big proportion of the egg "seeds" (or unripe yolks). Years and years of tests on different breeds of hens in different climates have proved beyond the shadow of a doubt that there is nothing like KARSWOOD POULTRY SPICE (which contains dried and ground insects) for helping hens to lay their full quantity of eggs. Karswood contains no forcing ingredients. It acts naturally, and is absolutely harmless. Give it a trial for a fortnight, and note the results. The cost is only a half-penny a day for 12 birds.

Twice as Many Eggs.

Dear Sirs,—

Your advertisement in the "Evening Sun" this week came to my notice. I have a small Poultry Farm, and am a very enthusiastic user of Karswood. My first trial of it was on a yard of second season hens, the result was they gave twice as many eggs in that season as they gave in their first season.

I find it brings the young table birds on very rapidly; at three months old on Karswood they are equal in size to five months' old without Karswood. That means a smaller feed bill and quick returns.

I am overstocked with the empty 7 lb. tins, and am wondering if you have any idea of collecting and buying the tins back again. It is rather a problem how to dispose of them, and they are too good to throw away.

(Sgd.) MISS M. SHORT,
North Manly.

Make This Test.

Go to your local grocer, storekeeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results; Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Supplies.

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½ lb. packet, Price 1/-; 1 lb. packet, Price 2/-; 7 lb. tin, Price 13/-; 14 lb. tin, Price 25/-; 28 lb. tin, Price 48/-.

27/41

POULTRY.

Kerosene Emulsion.

Death to Vermin in Poultry Houses.

Poultry vermin may be divided in two groups:—(1) Those that live and hibernate in the poultry houses, of which the red mite is an example; and (2) those that pass their whole existence on the fowl itself. It is mainly with the first class that we are concerned in this article, and to combat these we must spray or otherwise attack them in the poultry buildings and on the roosts, whence they emerge at night to prey upon the fowls, which are practically free from infestation during the day, except for the few vermin that may be rubbed off the nests, perches, or walls.

The perches should be painted with kerosene tar—known by a number of different names—but the only spray for treating the houses and perches is kerosene emulsion, which should be mixed according to the following directions. The method described below is the only way in which it is possible to make the emulsion, and unless it is followed exactly, the product will be useless. If the oil and water are not thoroughly emulsified (mixed) the oil will float on top of the soapy water and the mixture will be absolutely ineffective.

Mixing the Spray.

To make the emulsion, take 8 oz. of soft soap and dissolve it in 1 gallon of boiling water; take the mixture off the fire and add slowly 1 gallon of kerosene, stirring all the time. This mixture should be agitated briskly until the oil and the soapy water are thoroughly emulsified. These two gallons are then designated the "stock." Add to this ten gallons of soft water. Hard water will not do, nor should lime or any caustic substance come in contact with it, or the result will be that the oil will separate from the soapy water, and the emulsion will be spoiled.

If it be desired to make the spray also a disinfectant, add one tablespoonful of miscible carbolic acid to each gallon of emulsion. The whole should be kept well stirred, especially when adding water.

A small force-pump suitable for this work, which can be stood in a kerosene tin and held down by means of a foot-rest that is provided, is obtainable, complete, with a short length of hose and nozzle at about 32/6, in Sydney.

Poultry-keepers will no doubt recognise the above spray as being the same mixture as the N.S.W. Department of Agriculture recommends for fighting the fowl tick.

Kerosene emulsion should not, however, be used to combat the body louse of the hen, as kerosene burns the skin of the bird. To rid birds of that pest there is nothing better than flowers of sulphur dusted thoroughly through the feathers, using it as an insecticide. The sulphur, to be effective, must reach the skin. The treatment should be repeated in about eight days, when the trouble should be at an end for the time being. Flowers of sulphur added to the dust bath is also an excellent preventive.

BEES AND HONEY.

Beeswax.

Melt Up the Damaged Combs.

The market for best quality beeswax is almost invariably good, yet there is much waste of this valuable product in many localities because apiarists neglect to melt up unsatisfactory or damaged combs; or, if the melting is undertaken it is not carried out properly, and the result is a poor quality wax for which there is very little demand. Moreover, the careless beekeeper often spreads disease to a neighboring apiary by leaving about old damaged combs, frequently allowing combs attacked by wax moths to go to waste, and afterwards purchasing foundation comb at a high price. In seasons after drought more care than usual is necessary to keep the apiary free from disease. The N.S.W. Department of Agriculture points out that under the Apiaries Act the wax moth is a proclaimed pest, and with infested combs on hand apiarists are sure to meet trouble when the Inspector calls.

The natural color of beeswax is yellow, but by bleaching it can be lightened in color even to pure white. Wax can be bleached by moulding it into thin sheets and exposing these in the sunlight. Dark color in wax may result if rusted iron or galvanised vessels are used for melting.

Melting the Wax.

Where a patent cappings reducer is used, the wax is melted and separated from the honey as the work of uncapping the honey proceeds. In this case, where the blocks of wax so produced are cool, they should be put through a refining process before being sent to the market. Where no cappings reducer is used, a wax extractor is useful for melting the wax from the strained cappings.

Melting the combs is considerably more difficult than the treatment of cappings, but it pays to make a good job of it. For the ordinary apiarist, or where only a small number of combs have to be melted annually, the only plant required would be a few kerosene-tin buckets and a small wax press. A fair-sized vat with a tap or gate at the bottom is also desirable. A good supply of water should be available; clean, fresh water of any description will do provided it is not mineralised.

Stand the kerosene tins on bricks built up about a foot so that a fire can be built under the tins; then a little more than half-fill tins with water and proceed to heat. Put in the tin sufficient comb to make a free mush, and allow this to stand at about boiling point, stirring occasionally until melted up; then pour a quantity into the press, which has previously been kept warm and which contains a straining cloth. Small quantities of the melted mass, with a fair supply of hot water, give the best results. When a sufficient quantity is in the press, fold the straining cloth neatly over and apply the screw pressure gradually.

After applying the first pressure and allowing to stand for a time, ease the screw sufficiently to allow the hot water to get over the slum gum; then apply the pressure again, leave the hard pressure on for a few minutes, and tip the press forward, draining the water and wax into a bucket, which is then emptied into the vat. The slum gum is removed from the press and the remaining quantities of melted comb treated.

When the melted comb from the tins on the fire has been treated, the hot water can be drained from the vat into the melting tins again, and a

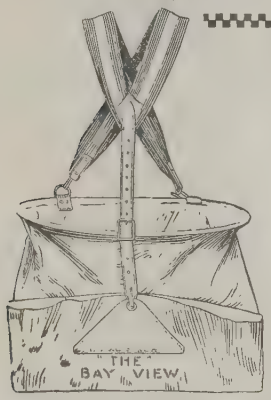
start made with a fresh lot of comb. After completion of the day's work the wax can be drained from the vat into the moulds, which should be placed in warm water and covered to allow the necessary slow cooling. To obtain a high grade wax, the blocks of wax from the moulds when cool should be cleaned at the bottom and then properly refined.

How to Refine Beeswax.

A fair-sized tinned vessel is quarter filled with water, and the blocks of wax, which have previously undergone the treatment already described, are added. The vessel is then heated, and the wax melted slowly but thoroughly, the fire withdrawn, and the wax allowed to stand (well covered) in a warm room for a few hours. It is then drained off from the top into suitable moulds until the underlying impure matter is reached. The moulds should have flanged sides previously smeared with glycerine, and when containing the wax should be placed in warm water to ensure slow cooling. When properly cooled off the wax is removed from the moulds and any adhering impurity scraped off.

To expedite the work of cleaning wax from utensils, kerosene will be found of service where its use is practicable.

Persons have sometimes tried to sell adulterated wax—usually a mixture of tallow or paraffin—but since the adulterated article is easily detected under the specific gravity test, and generally results in a loss to the seller, very little adulteration is carried on nowadays.



"Bay View" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

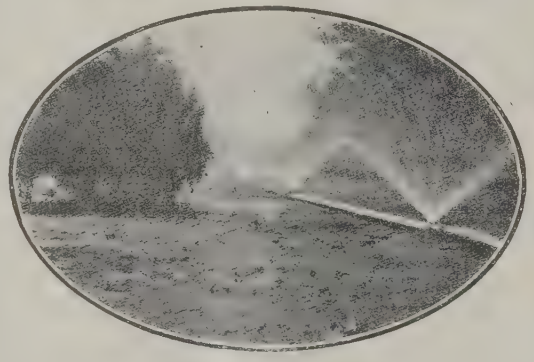
PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

Pope's New Irrigation System

Pat. Nos. 9127/22 & 21419/25



The **LATEST, CHEAPEST,** and **BEST,** for **FRUIT, FODDER** and **VEGETABLE CROPS.**

(See descriptive matter in October issue.)

One of many testimonials:

Pope Sprinkler Co., Croydon. Highbury, S.A.

Gentlemen,

Having used your irrigation system on my Orange Orchard for two seasons, I consider it the most effective method of orchard irrigation I have yet heard of. The output from the pump delivering eleven thousand gallons per hour, at thirty pounds pressure, is comfortably handled by one man without the necessity of any stop during the day, and by allowing the pump to run for an hour after he leaves work, I get ten hours pumping, or one hundred and ten thousand gallons of water applied for eight hours' work, and an absolutely even distribution of the water as well, in addition to effecting a great saving in labor.

Needless to say, I should not like to have to return to the old furrow and check system of irrigation.

Yours faithfully,
L. J. WICKS.

Full particulars from any of the following:—

Pope's Sprinkler and Irrigation Coy., (Patentees)

ROBERT STREET, CROYDON PARK, S.A.

Agencies: John Danks & Sons Pty. Ltd., Sydney.
John Danks & Sons Pty. Ltd., Melbourne.
Messrs. Clark & Faucet, Brisbane.
Messrs. Harris, Scarfe and Sandover Ltd., Perth.

UNITING BEES.

I do not believe much in uniting colonies, but there are times when it is necessary, says a writer in the "American Bee Journal." If you have had a number of late swarms and have hived them separately, it is quite possible to be overstocked with weak colonies in fall. We rarely have swarms, almost never any secondary swarms. Whenever we have had them, we followed the method of the old beekeeper, Hamet, who advised to hive the second swarm in any kind of box and return it to the parent colony at the end of 24 to 48 hours. By that time the hive has quieted down and there is but one young queen left. If you kill the queen of the swarm that you return, you put an end to any trouble. But if you do not find her, when the swarm is returned, the two queens will fight; one of them will be victor and the colony, having gotten over its swarming fever, will continue life usually with a sufficient number of bees to gather plenty for winter. In this way we avoid the necessity of uniting any colonies.

When we have weak colonies in the autumn, we do not believe in keeping them separately till spring. If we do, and find them alive and with fertile queens in spring, we will certainly not unite them then. Good queens are a valuable asset in spring and it is worth while to save every one. The time to unite our bees is in the autumn, when we have two colonies undersized and short of the necessary amount of food.

There are different ways of uniting. The method of Dr. Miller, called "the newspaper plan," is probably as good as any. It consists, as most beekeepers know, in putting the weaker of two colonies over the stronger one, with only a newspaper between the two brood chambers. The bees cut away the paper and unite gradually. They do not fight, if they have sufficient stores to be comfortable. It is much the best to kill one of the

two queens beforehand, as we can thus select the one that we prefer. She is usually in the stronger of the two colonies.

Sometimes we have found it quite easy to unite a weak colony to a stronger one, by lifting the combs on which the bees are clustered, on a cool evening, and setting them down inside of the other colony. The two hives have to be made ready beforehand, by removing the most undesirable combs, so as to have room to let the combs of the weaker colony fit down in the side of the stronger hive. If there are only three such combs, the beekeeper can lift them all together without disturbing the bees enough for any of them to take wing. I have done this quite often. If the two colonies have been fed slightly the day before, they will be in good temper and will fight very little, if at all.

In any case, it is best to examine the colonies a few days after the uniting, so as to arrange their combs in good order for winter. A colony, made of two that were scantly supplied for winter, is likely to have plenty and is much more likely to winter with the strength of the two swarms than singly.

The cool weather of October days, in our latitude, is the best for such unions, as the bees fly but little and the danger of robbing is almost nil.

Colonies that are weak, but that have been kept alive till spring, with a fertile queen, are too valuable, in my opinion, to be united. They may be given bees bought from the South, by the pound, or a little help from very strong colonies, or some queenless colony in the apiary may be united to such queenright colonies.

Thus, I believe in uniting bees, as a rule, only in autumn.

PUBLICATIONS RECEIVED.

We acknowledge with thanks the receipt of a "Review of the 1927 Australian and New Zealand Fruit Season," from Messrs. F. W. Moore & Co. Ltd., London; also the "4th Annual Report of Irrigation and Drainage Commission of South Australia."

California Fruitgrowers' Exchange.—Annual report for the year ended October 31, 1927.

New South Wales Water Conservation and Irrigation Commission.—Report for the year ended June 30, 1927.

South Australian Government Produce Department.—Report for the year ended June 30, 1927.

S.A. Irrigation and Drainage Commission.—Fourth annual report, 1926-27.

Representations by fruitgrowers' organisations have been successful in averting any increased duty on imported fruit case shooks.

FRUIT EXPORT CONTROL.

A Letter from South Africa.

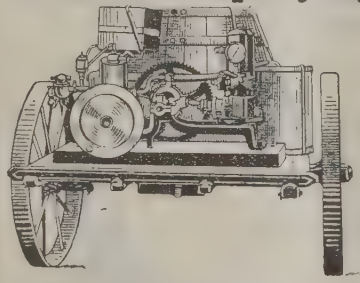
Mr. Parnham's Figures Criticised.

Mr. Fred W. Patten, general manager of the Federated Farmers' Co-operative Association of South Africa Ltd., wrote recently to the editor of the "Fruit World," commenting on a letter by Mr. C. J. Parnham, fruit exporter, published in our August issue, in which Mr. Parnham stated his objections to the proposed Fresh Fruit Export Control Bill, and quoted his views on the cost of somewhat similar legislation in South Africa.

In reply, Mr. Patten urges the necessity for the supervision of the sale in England of fruits exported from South Africa, and commends the report of the Imperial Economic Committee and the services of the Overseas Farmers' Co-operative Federations Ltd.

Continuing, Mr. Patten then quotes in full from a letter signed by the manager of the South African Fruit Exchange at Cape Town, in which Mr. Parnham's figures are stated to be inaccurate. "Instead of the Control Board costing £20,000 as stated by Mr. Parnham, the cost to the grower is about £5000 per annum. The total cost is about £10,000, the difference being paid by the South African Government." Mr. Parnham gives the cost of running the Fruit Exchange at £30,000, raised by a levy of 5/- a

Effective Spraying means Better Crops and Bigger Profits



Made in Single and Double Plunges
3 and 4 horse power

You can have the same results as thousands of other growers by using

The BAVE-U (Pioneer Australian) POWER SPRAYER

All BAVE-U SPRAYERS are fitted with our Patent Suction Pipe Strainer, which saves the time that is wasted through having to clean choked nozzles

Declared by a number of users to be worth its weight in gold

Write for Catalogue to the Makers:—

RUSSELL & CO. BOX HILL, MELBOURNE VICTORIA
ENGINEERS

AGENTS:—SOUTH AUSTRALIA—PREMIER MACHINERY CO., Morphett St. Adelaide. WESTERN AUSTRALIAN-PATTERSON & Co. Ltd. William St., Perth

Have You purchased your Copy of the

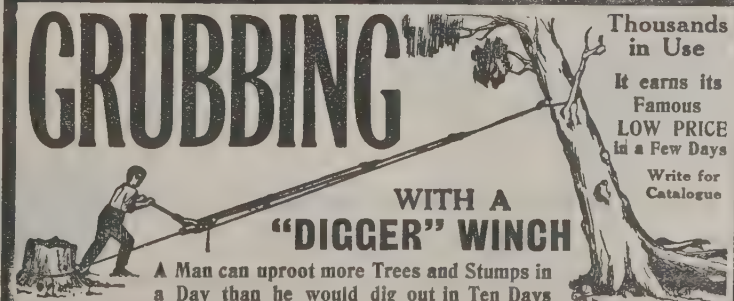
Fruit Growers' & Gardeners' Chart

For Control of Insect Pests & Plant Diseases

Beautifully Illustrated in Colors
Price — 21/- — Posted

FRUIT WORLD PTY. LTD.
BANK HOUSE, BANK PLACE, MELB.

GRUBBING



Thousands in Use

It earns its Famous LOW PRICE in a Few Days

Write for Catalogue

WITH A "DIGGER" WINCH

A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days

QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

ton. This is obviously wrong, as the total export was 56,000 tons, which at 5/- a ton would yield only £14,000.

"Regarding the 20/- per ton for equalization of freight. Mr. Parnham says the growers receive a rebate of 10/8 per ton, and wonders what has become of the balance. South African growers are aware that the 9/4 they have paid under the equalization rate scheme is for port expenses overseas, also on account of higher rates, where outside vessels had to be obtained to lift the surplus which the ordinary liners had no space for. The 9/4 has, therefore, gone into the pockets of the shipping companies and port companies overseas.

"There was no 'bank up' at the precooling station, as stated by Mr. Parnham, the fruit being all lifted within a few days of its arrival with astonishing regularity.

"The instance quoted by Mr. Parnham, which refers to fruit being sold in London in May, 1926, and the grower not receiving the proceeds until September, is totally incorrect. The Exchange did not sell any fruit in London in 1926. All fruit was sent to the usual salesman, who settled immediately in the customary manner, and the Fruit Exchange had nothing whatever to do with fruit sales in the United Kingdom that year."

The letter further states that South African growers are determined to have their marketing supervised by their own organization.

ANSWERS TO CORRESPONDENTS.

DRYING COE'S GOLDEN DROP PLUM.

W. R. Pounsett, Coonawarra, South Australia, writes:—May I ask for information through your valuable paper as to the following:—In drying Coe's Golden Drop to get the best color, the point I am anxious to learn is treatment from the time the first dipping starts to fill the sulphur house until there is enough dipped to put fruit in house, as the first trays that were dipped have gone quite dark. This is the point: Would it be the correct thing to sprinkle the earlier dipped trays or even the lot with water before sulphuring?

Also, what is the best preparation after fruit is dry to put a good gloss on it for market?

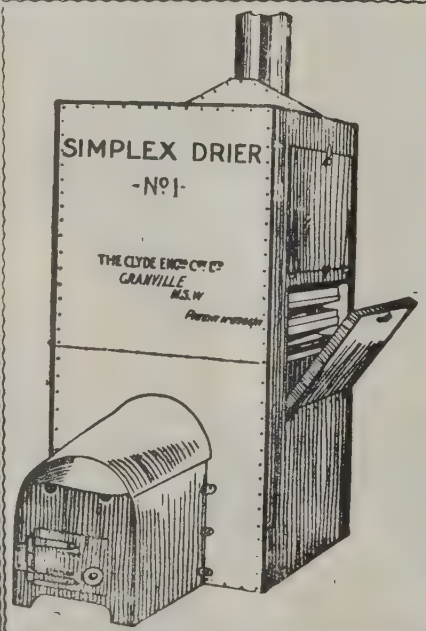
Answer (by Geo. Quinn, Chief Horticultural Instructor, S.A.).—Mr. A. B. Robin, of Paragrove Orchard, Nuriootpa, who has dried the finest colored Golden Drops it has been my privilege to see, uses the following procedure:—

The fruits, which should be quite ripe when harvested, are graded into even sizes and then dipped in a boiling caustic soda solution—of approximately 1 lb. caustic soda in 20 gallons of water—for about 20 seconds. They may then be passed through a clean water bath to remove the alkali before being placed on the drying trays, but this is not imperative. After dipping, they are sulphured as soon as possible, and should not get dry through exposure to the air or the ultimate brightness of the color will suffer. It is true, dark fruits can be improved by being again dipped in hot water and sulphured while still wet, but the best bright golden color will not be obtained from these.

Golden Drop Plums require longer sulphuring than cut-stone fruits, such as Apricots, Peaches and Nectarines, and not less than 18 hours in the sulphur house has been found sufficient to fix the color.

Mr. Robin says it is admissible to give the dried Golden Drops a second dipping in hot water in which 1 lb. of pure glycerine is blended immediately before they are packed, as this prevents "sugaring," and gives the skin a glossy appearance.

Any darker fruits could be sorted out and lightly sulphured again.



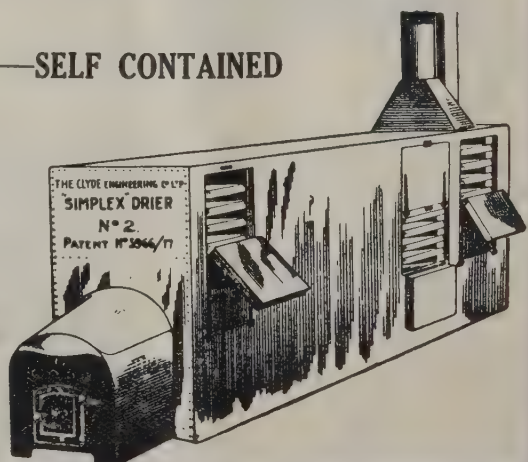
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE———SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ld.
GRANVILLE, N.S.W.

To make an attractive product, the fruit should be well grown and free from the defect arising from excessive heat, which dries up and browns the pulp in patches beneath the apparently uninjured skin.

If one had many Golden Drops to handle, it would be well to have a sulphur box or house containing the evolving sulphur dioxide gas into which the trays could be made to slide one by one as soon as the fruit had been dipped and before the moisture could dry away from the skins and discoloration set in. These Plums do not absorb sulphur so freely as other stone fruits. A fine sample prepared by Mr. Robin yielded, on analysis, an equivalent to 3.78 grains of SO2 per lb. of dried fruit, whilst a bright sample of whole dried Apricots similarly dipped and sulphured, contained as high as 25 grains of SO2 per lb. The British Pure Foods Law permits 14 grains per lb. in these fruits.

Lace-Winged Insect—Not Harmful.

W. P. Coleman, Somerville, writes:—Would you please let me know through your journal what are those small eggs one sees at this time of year attached to a hair about ½ inch long, sticking straight out from the Apples? I have asked other orchardists and they do not know, and I consider it important that we should understand as much as possible about these things.

Answer (by J. M. Ward, Supt. of Horticulture).—The eggs your correspondent mentioned are no doubt those of the "Lace-winged" insect of the Order Neuoptera, and of the family Chrysopidae.

The insect in question belongs to the same group as the dragon fly. It is not harmful to plant life.

MESSRS. TIM YOUNG & CO. PTY. LTD.

The old-established firm of wholesale fruit merchants, Messrs. Tim Young & Co., of the Western Market, Melbourne, was formed into a company at the beginning of January, and is now trading as Tim Young & Co. Pty. Ltd.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE" 499 LITTLE COLLINS ST. MELBOURNE.

THE VALUE OF BIRDS.

We are interested to read in the "Bulletin" of the Californian Department of Agriculture an interesting article on Beneficial Birds, by the Leader of Predatory Animal Control in the U.S. Biological Survey (Mr. C. G. Poole).

He refers particularly to the owls and hawks, of which he says, "Probably in all bird life as far as their feeding habits affect farmers, ranchers, and sportsmen, no groups are more thoroughly misunderstood. Farmers have," he says, "no greater friends, either furred or feathered, than most of the members of these families," and he gives most convincing evidence to prove this. Finally he says: "If people would study the habits of the birds they see about them, and also look up their life histories and food habits as determined by those who have made studies of this subject, they would be able to act understandingly, and in many cases would be prevented from killing birds which are an asset rather than a liability."

A NOTED BRITISH VISITOR.

Dr. Haden Guest, M.P., a Labor Member of the British House of Commons, who is visiting Australia, has travelled extensively through the dried fruits districts, and is greatly impressed with the hygienic conditions under which the fruit is grown and packed, and the efficient machinery and management, as compared with fruit from the Mediterranean countries. Dr. Haden Guest is a keen advocate of Empire trade, and even before coming to Australia, constantly supported the purchase of Australian dried fruits.

Business-Like Farming

FARMING (or orcharding) is a business just the same as running a grocery store, or making fertilisers, or selling motor cars. Getting more from each acre cultivated is the same thing as increased factory production. It means greater "turnover" from the same "overhead." Lowered costs, greater profits. Produce if you can from 50 acres what it has taken 100 to yield, and see the application of this principle. Business-like farming and orcharding see the value of

Sulphate of Ammonia

because the increased yield that it influences makes every acre more productive. The return is out of all proportion to the outlay, and crop costs are cut to a minimum.

Learn more about Sulphate of Ammonia—the information is free.

THE METROPOLITAN GAS CO.
196 Flinders Street, MELBOURNE

IMPORTANT AGENCY

Large firm of London Boxboard Agents, representing best Scandinavian and Finnish Boxboard Shippers, desire to appoint Sole Sub-Agent for sale Boxboards to Fruit Growers in Australia. Please reply, giving references and particulars of connection with largest users and packers.

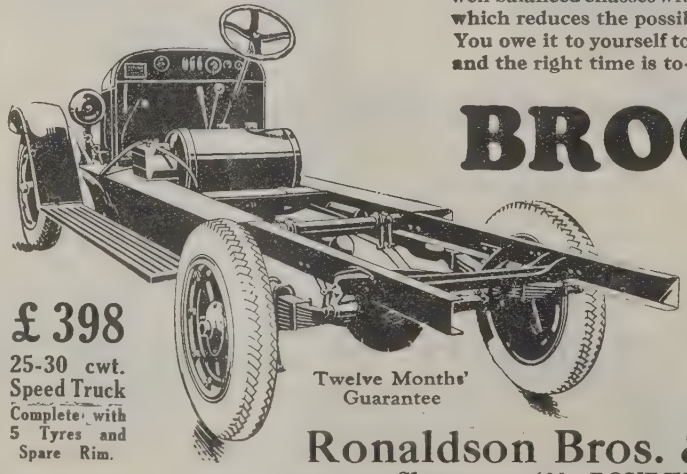
WRITE TO:

"BOXBOARD" C/o BOX 241 D, G.P.O. SYDNEY

... the truth about Truck economy

25-30 cwt.—35cwt.—2 and 3½ ton Models

LOW initial price is sometimes mighty tempting to those not acquainted with Truck values. But experienced Truck owners know that good Trucks cost much less per ton-mile, per month and per year. This is true economy. The "Brockway" 25-30cwt. and 30-35 cwt. speed Trucks are the ideal combination of sturdiness and easy riding, of economy and dependability, of speed with safety. They are specially adapted to the Orchadist's requirements. The well balanced chasses with low centre of gravity gives low cushioning which reduces the possibitity of damage to goods to a minimum. You owe it to yourself to investigate the "Brockway" line of Trucks and the right time is to-day---NOW.



£398

25-30 cwt. Speed Truck Complete with 5 Tyres and Spare Rim.

Twelve Months' Guarantee

BROCKWAY

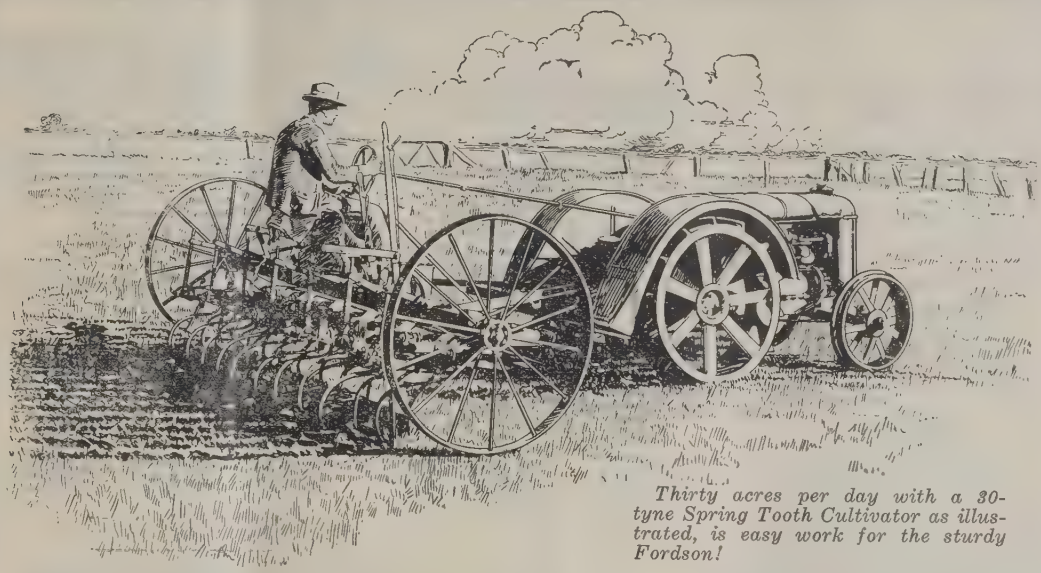
ORCHARDISTS WHO HAVE RECENTLY PURCHASED BROCKWAYS.

TAINTON, H. E. .. Forest Hill
LECHTE, A. .. .. .. Burwood
CORBETT BROS. .. Doncaster
WHITTEN BROS. .. Doncaster
WOOD, F. C. .. .. .. Ardmona
FRITSCH, F. .. .. .. Merricks

Ronaldson Bros. & Tippett Pty. Ltd.

Showroom 630a BOURKE STREET, MELBOURNE

SERVICE STATION : 527 SPENCER STREET MELBOURNE.



Thirty acres per day with a 30-tyne Spring Tooth Cultivator as illustrated, is easy work for the sturdy Fordson!

Conserve soil moisture!

THE greatest single factor in plant growth is moisture. Moisture is necessary in the seed bed to make plant food in the soil available for the plant to use. The big problem is to prevent quick evaporation.

By the quick and effective use of the Cultivator with the Fordson, a surface mulch is created which conserves the soil moisture. The Fordson will do this work in half the time it takes horses, thus enabling you to cultivate intensively and have time available for other work. Mr. J. A. MacKenzie, Ben Lomond, Harrismith, W.A., writes of his experience with the Fordson:—

"I have had my Fordson Tractor 12 months, and during this period it has given me every satisfaction. Last Autumn I covered close on 400 acres pulling a Stump-jump Disc Plough. In the Winter I covered 300 acres fallow pulling with a four-furrow S. J. Mouldboard Plough. In December and January I harvested 340 acres of wheat, pulling a 6-foot Harvester (and it pulled it easily over sand patches). I am now cultivating my fallow, pulling a 30-tyne Spring Tooth Cultivator and averaging 30 acres per day."

Ask your nearest Ford Dealer to demonstrate the Fordson Tractor on your own property. Ask him, too, about the easy terms of payment by which you can own your Fordson to-day.

Fordson

THE UNIVERSAL TRACTOR

£195 Complete with Fenders and Pulley. F.O.B. Ford Works in this State.

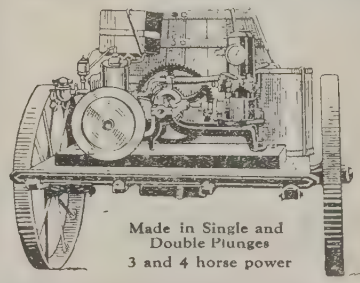
FORD MOTOR COMPANY OF AUSTRALIA PTY. LTD. BRANCHES IN ALL STATES

The Pioneer Australian Power Sprayer——————and the Best.

BAVE-U Power Sprayer

Follow the example of thousands of growers and use the Bave-U.
It is easy and simple to operate, and what is most important—it is most reliable.
The Patent Suction Pipe Strainer absolutely prevents chocked nozzles, and so the spraying is done without any lost time in irritating adjustments, etc.
Catalogue and all particulars will be supplied with pleasure.

RUSSELL & CO. BOX HILL
MELBOURNE, VICTORIA. ENGINEERS



Made in Single and Double Plunges
3 and 4 horse power

AGENTS—
South Australia:
Premier Machinery Co.,
Morphett Street,
Adelaide.

Western Australia:
Patterson & Co.,
Perth.

Naylor

Growers of — Apricots, Peaches etc.

Do not neglect to spray for Brown Rot, Leaf-Curl, Scales, Aphides, etc.

Complete formulae and illustrated details for treatment published in the

"Fruitgrowers' and Gardeners' Chart"

giving modern scientific methods for the control of

Insect Pests and Plant Diseases

56 Colored Illustrations. Linen backed and mounted on rollers

SEND FOR A COPY NOW

Price 21/- Post Free

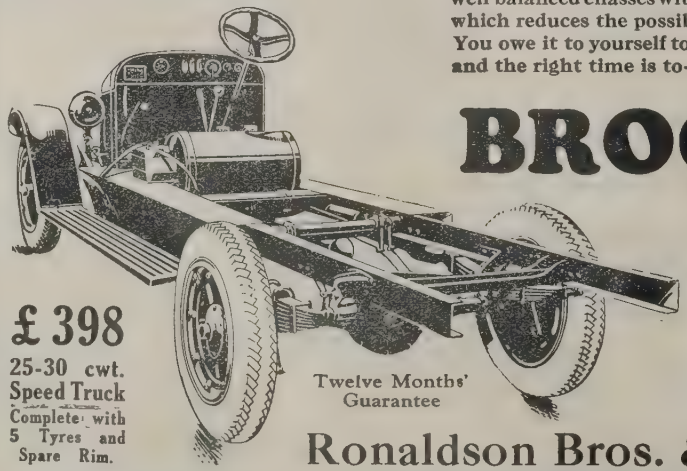
FRUIT WORLD PTY. LTD.,
BANK HOUSE, BANK PLACE, MELB.

... the truth about Truck economy

25-30 cwt.—35cwt.—2 and 3½ ton Models

LOW initial price is sometimes mighty tempting to those not acquainted with Truck values. But experienced Truck owners know that good Trucks cost much less per ton-mile, per month and per year. This is true economy. The "Brockway" 25-30cwt. and 30-35 cwt. speed Trucks are the ideal combination of sturdiness and easy riding, of economy and dependability, of speed with safety. They are specially adapted to the Orchadist's requirements. The well balanced chasses with low centre of gravity gives low cushioning which reduces the possibitity of damage to goods to a minimum. You owe it to yourself to investigate the "Brockway" line of Trucks and the right time is to-day---NOW.

BROCKWAY



£398
25-30 cwt. Speed Truck
Complete with 5 Tyres and Spare Rim.

Twelve Months' Guarantee

ORCHARDISTS WHO HAVE RECENTLY PURCHASED BROCKWAYS.

TAINTON, H. E. .. Forest Hill
LECHTE, A. .. .. .. Burwood
CORBETT BROS. .. Doncaster
WHITTEN BROS. .. Doncaster
WOOD, F. C. .. .. .. Ardmona
FRITSCH, F. .. .. .. Merricks

Ronaldson Bros. & Tippett Pty. Ltd.

Showroom 630a BOURKE STREET, MELBOURNE
SERVICE STATION : 527 SPENCER STREET MELBOURNE.

Take Advantage *of the Two-Fold Action of* "Black Leaf 40"

Kills by CONTACT and FUMES

While the effectiveness of "Black Leaf 40" in killing Aphis, Thrips, Woolly Aphis' and similar sucking insects is primarily dependent upon direct contact (wetting), a secondary advantage is furnished by the "gassing" effects of the penetrating nicotine fumes set free in the spraying material. This two-fold action helps definitely towards securing the highest percentage of efficiency—and is an advantage that is not possessed by any non-volatile spraying solution.

Also Assists Worm Control

At dilutions recommended for killing Aphis, "Black Leaf 40" kills the larvae of many "chewing" insects. Newly-hatched worms absorb the nicotine into their soft, tender bodies, and are very susceptible. By using stronger solutions of "Black Leaf 40" even more mature worms may be killed.

"Black Leaf 40" may be combined with standard orchard sprays, such as Lime-Sulphur, Bordeaux Mixture, Oil Sprays, Lead Arsenate, etc.

Tobacco By-Products & Chemical Corporation (INCORPORATED)

LOUISVILLE, KENTUCKY, U.S.A.

Sold by leading Dealers in Australia and New Zealand.

"Black Leaf 40"
40% Nicotine

KILL APHIS "Black Leaf 40" DUST-SPRAY

Spitalfields Market, LONDON

(Owned and controlled by the Corporation of the City of London)

Supplies a Population of 9,000,000

Nearest Market to

THE PORT OF LONDON
DOCKS AND WHARVES

with Railway connections to all parts of

THE UNITED KINGDOM

EXCEPTIONAL FACILITIES FOR
RAPID HANDLING
ALL CLASSES OF FRUIT AND VEGETABLES
HOME GROWN OR IMPORTED

— Extensions now in hand will make this the —

LARGEST FRUIT & VEGETABLE MARKET IN GREAT BRITAIN

BRITISH AND COLONIAL GROWERS CONSIGN TO
SPITALFIELDS MARKET

General Information can be obtained from:—
SUPERINTENDENT, SPITALFIELDS MARKET, LONDON, E.1.

Fruit For Great Britain

THE PORT OF HULL

is

Excellently Equipped for Rapid Handling of Fruit Cargoes
Nearly Seven Million Packages Imported during 1925
SALES HELD THROUGHOUT THE YEAR

QUICK DESPATCH

by the

London & North Eastern Railway

To All Parts of the Country

Further information gladly given on application to
MESSRS BURNS PHILP & CO. LTD., 84 William Street, Melbourne or Head Office, Sydney and Branches

We are offering the following New Varieties for the Coming Planting Season.

APPLE *"Lalla,"* a very highly colored Delicious which originated in our Lalla Orchard.

NEW BLACK CURRANT, *Daniel's Late,* two months later than any other variety, heavy cropper, large berries.

NEW RASPBERRY, *Lloyd George.* In R.H.S. tests, this variety was the leading one, strong grower, heavy bearer, large fruit of the highest quality. Every Fruitgrower should plant these.

Particulars Inquire **FRANK WALKER,** Nurseryman and Florist

110 Brisbane Street, Launceston

SALES DEPOTS.

No. 542-543 Covent Garden Market.
No. 97, 98, 101 Long Acre.
No. 1 Endell Street.

Cables—Spinach, London.
Codes—A.B.C., 5th Edition; Bentley's.

OFFICES.
97, 98 101 Long Acre.

FRUITGROWERS!

Consign your Fruit to

PASK, CORNISH & SMART

——COVENT GARDEN——
LONDON W.C. 2, England

THE PROGRESSIVE FIRM of FRUIT SALESMEN

Who receive consignments of **Apples, Pears, Oranges,** and **Grapes** all the year round, thus assuring a clientele of best buyers. Spacious Sale Rooms suitably situated to display fruit to very best advantage.

Reasonable advances made against Bills of Lading. Balances paid by cheques drawn on Australasian Banks.

Sales entirely by Private Treaty

Last year handled more than ONE MILLION Packages of English, Colonial and Foreign Fruits.

REPRESENTED AT

TASMANIA	SOUTH AFRICA	LAS PALMAS
WESTERN AUSTRALIA	NEW YORK	AZORES
	TENERIFFE	

And all Principal Fruit Growing Centres in England, France, Spain Belgium and Holland.

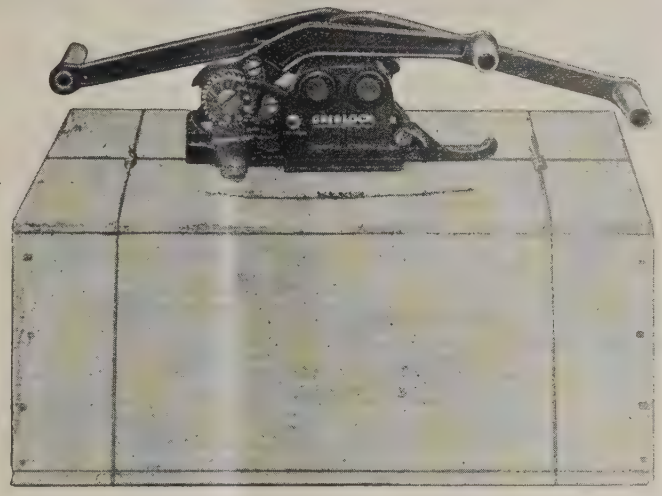
Tasmanian Representatives— **E. R. COTTIER & CO., A.M.P. Buildings, 88 Collins St., Hobart.**

Western Australia Representatives—
THOMAS HAYWOOD & SONS LIMITED, Bunbury, W.A.

REPRESENTATIVES REQUIRED in South Australia, Victoria and New Zealand.

FOR BEST FRUIT PRICES —

WIRE-STRAP YOUR CASES



The Griplock Improved Box Strapping Tool.

in the

LATEST AND MOST IMPROVED METHOD

The "GRIPLOCK"

is the most efficient as well as the cheapest BOX STRAPPING method on the market.

IT IS THE ONLY TOOL WHICH OPERATES A HARD WIRE

Once GRIP-LOCKED the wire cannot be tampered with.

Full particulars from :— **Phone : J 2009**

GRIPLOCK—Safe Seal Systems, Waltham Place, Richmond, Vic.

Sole Australian Agents for Root Dusting Mechanical Appliances
(Patented)

Atomol Dusts Ltd.

Manufacturers of

DUSTING MATERIALS used as **INSECTICIDES** & **FUNGICIDES ON PLANT LIFE**

DUMPHRIES PLACE
off GILLES STREET
ADELAIDE

Growers would be well advised to allot part of their orchards this coming season for the purpose of making a comparison between dusting and spraying. Providing that the correct dust and dusting mechanical appliances are used, we are convinced that dusting will be generally adopted for controlling all insect and fungi pests.

Atomol dusting material and Root mechanical dusting appliances combine all the essential features of successful dusting. One man with a Root Hand Dust Gun, costing only a few pounds, will cover as much ground as a power spraying machine costing £100 or over in a given time.

SEND FOR OUR PAMPHLET, OR ENQUIRE THROUGH THE UNDERMENTIONED INTERSTATE AGENTS:—

VICTORIA:—
Irymple Packing Co., Irymple.
Irymple Packing Co., Merbein.
Sarnia Packing Co., Mildura.
Humphreys & Conran, Red Cliffs.
Mr. G. W. Hall, Box 1, Bunyip.

NEW SOUTH WALES:—
Anderson & Co., George St., Sydney.

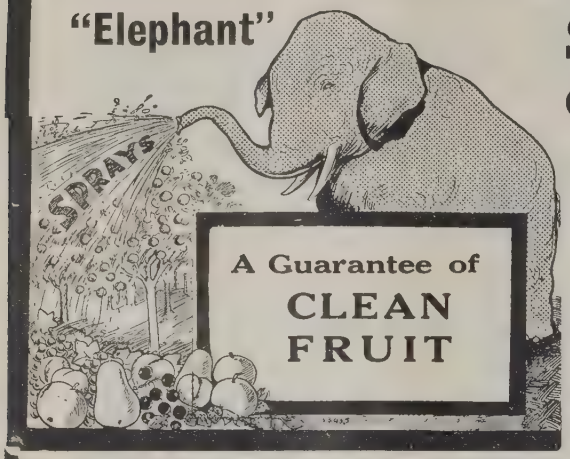
QUEENSLAND:—
Buzacotts' Queensland Limited, Brisbane.

WESTERN AUSTRALIA:—
Westralian Farmers' Union, 569 Wellington St., Perth.

TASMANIA:—
Charles Davis Ltd., 60 Elizabeth St., Hobart.

NEW ZEALAND:—
Harold Lightband Ltd., 79a Lichfield St., Christchurch.

THE ROOT HAND DUST GUN IS AN IDEAL MACHINE FOR THE APPLICATION OF CALCIUM CYANIDE OR CYANGAS.



STILL ON TOP!!

Orchardists Note This

The following Suspension Tests of

ARSENATE OF LEAD

over a period of six years show that "ELEPHANT" Brand still maintains First Place.

MADE IN AUSTRALIA
MADE BY AUSTRALIANS
MADE FOR AUSTRALIANS

Published in South Australian Journal of Agriculture, January, 1921.
Percentage of Arsenate of Lead remaining in SUSPENSION after.

Brand.	5 minutes.	15 minutes.	30 minutes
ELEPHANT PASTE	89.35	41.2	—
Bluebell	23.7	6.75	—
Vallo	39.7	12.1	—
Electro	22.85	6.2	—
Swifts	53.35	35.3	—

Published in the South Australian Journal of Agriculture, March, 1923.

ELEPHANT PASTE	52.4	43.0	36.7
Bluebell	11.2	6.3	4.1
Vallo	7.6	4.2	3.5
Electro	7.5	4.9	3.0
Swifts	36.4	28.0	16.6

Published in the South Australian Journal of Agriculture, 1926.

ELEPHANT PASTE	82.2	68.8	50.4
Bluebell	78.1	62.7	60.3
Vallo	Not published.		
Electro	13.0	6.0	3.2
Swifts	48.0	20.5	13.1

Published in the New South Wales Journal of Agriculture, December, 1927
Percentage of Arsenate of Lead SETTLED after.

ELEPHANT PASTE	48.72	69.20	81.44
Bluebell	72.56	79.36	89.76
Vallo	75.36	80.48	90.72
Electro	76.80	91.12	95.28
Swifts	68.0	78.48	80.56

"ELEPHANT" BRAND, ARSENATE of LEAD, PASTE also POWDER

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of **Elephant Brand Sprays**

Manufacturing Chemists, MADDEN GROVE, BURNLEY, MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

NEW SOUTH WALES—PRODUCERS' DISTRIBUTING SOCIETY LTD., Valentine & Quay Streets, SYDNEY.
QUEENSLAND—BUZACOTTS LTD., Adelaide Street, BRISBANE.
SOUTH AUSTRALIA—SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.
WESTERN AUSTRALIA—WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.
TASMANIA—R. NETTLEFOLD PTY., Hobart; BELL & GERRARD, Launceston; COCKER, BELL PTY., Devonport.
NEW ZEALAND—PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for March 1928

Illustrations.

Fruit Marketing in U.S.A. .. 95
Root Stocks for Apples 97

Subjects.

Answers to Correspondents.. 123
Apple and Pear Grading Regulations 118–119
Brown Rot of Apples 107
Control of Codlin Moth .. xv.-xvii.
Codlin Moth Experiments .. 98
Canning Fruits: Shepparton District; Peach Week; Leeton Peach Crops; News and Notes 104–105
Citrus: Coloring Valencia Late Oranges; South Africa's Citrus Industry; Australian Oranges in England 124
Dried Fruits: Drying Sultana Grapes; Beware of Downy Mildew; N.S.W. Dried Fruits Board 101–102
Dried Fruit Sales 123
Editorial 99–100
Fruit Tree Stocks 97–98
Heavy Fruit Crops 100
Insect Pests, Fighting .. .. xvii.
Interstate Fruit Trade 111
Markets, British and Australasian 120–121
Meritorious Fruit Varieties.. 99
New South Wales: Orchard Operations; Organisation; District Notes 106, 115
New Zealand: Orchard Tax Act; Lemon Growing 103
Notes in Brief 105
Poultry and Bees 127-128
Queensland: Orchard Operations; News and Notes .. 116-117
Personal 94
Ranger's Report on U.S.A., Mr. 112–115
Science: Agriculture; Business 95–96
South Australia: Adelaide Fruit Markets; Record Apple Crops Expected .. 102
Spray Residue Removal .. xviii.
Sydney Royal Show 128
Tasmania: The Export Season; News and Notes 110–111
Victoria: Fruit Crop Reports; Re-organisation; News and Notes 122–123
"What America can Teach Us" 112–115
Western Australia: Retailing Fruit by Number 107

INDEX TO ADVERTISERS.

Books, Publications— . . .

"Garden Lover," Bank House, Bank Place, Melbourne, p. xxi.

"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, p. xii.

Canning Machines—

Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. ix.

Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—

Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—

"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. xv.

Dusting Machines—

Atomol Dusts Ltd., Dumphries Place, Adelaide, p. 91.

Fruit Buyers—

Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xix.

Fruit Tree Suppliers—

Brunning, John, and Sons, Somerville, p. 94.

C. A. Nobelius & Sons, Emerald, Vic., p. xxi.

Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 119.

Two Bays Nurseries, Moorooduc, Vic., p. xxii.

Fruit Graders—

"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood (Vic.), p. 108-109.

Fruit Picking Bag—

The "Bay View," F. R. Mellor, 440 Elizabeth St., Melbourne, p. 128.

Irrigation Hose and Canvas Goods.—

Wyett Mfg. Co. Pty. Ltd., Geelong, Vic., p. 123.

Manures, Fertilisers, &c.—

Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. xviii.

Motor Cars and Trucks—

Ford Motor Co. of Aus. Pty. Ltd., all States, p. xi.

Brockway Trucks, Ronaldson Bros., & Tippett Pty. Ltd., 630a Bourke St., Melbourne, p. xii.

Orchard Ploughs, Cultivators, &c.—

D. Harvey, Box Hill, Melbourne, p. 125.

Orchard Requisites—

McPherson's Pty. Ltd., 582 Collins St., Melbourne, Vic., p. xii.

Patent Attorney.—

Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. xvii.

Poultry—

Karswood Poultry Spice, Agents all States, p. 126.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—

Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xx.

Spray and Dusting Material—

"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. xiii.

"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.

"Elephant" Brand, Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. 92.

"Gargoyle' Spraying Oil, Vacuum Oil Co. Pty. Ltd., cover i.

"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.

"Clensel," Bruce Anderson, 56 Hardware St., Melbourne, p. 115

Dusting Powders, Atomol Dusts Ltd., Dumphries Place, Adelaide, p. 91.

"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. iv.

Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. xxii.

"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 112.

"Volck," H. C. Pannifex & Co., 26 Market St., Melbourne, C.1, p. xvi.

"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 114.

Spray Pumps and Guns—

Alumino-Thermic and Metal Sprayers Ltd., 247 George St., Sydney, N.S.W., p. iv.

"Bave-U" Power Sprayer, Russell & Co., Box Hill, p. xii.

604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. xix.

Spray Pumps, etc., Cooper Pegler & Co. Ltd., 24d, Christopher St., London, E.C.2, p. 119.

Strawboard Liners for Cases—

J. Fielding & Co. Ltd., Chalmers St., Sydney, cover ii.

Strapping Fruit Cases—

Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.

"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. 91.

Stencilling Inks—

Caldwell's Pty. Ltd., Yarra Bank Rd., South Melbourne, p. 104.

Transport—

London and N. E. Railway, Burns, Philp & Co., agents, p. 89.

Tree and Stump Pullers—

Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix.

"Digger," Quick Manufacturing Co., 75 Pender St., Thornbury, p. 128.

FRUIT TREES for Propagation

Many lines are worked on contract to Orchardists, Wholesalers, and others.	Have you any particular line you wish propagated from your own particular trees?	Budding is carried out during January, February, and March, 1928, but trees budded will not be ready till winter 1929. Any quantity, any kind.

186 Acres Under Intense Cultivation.

CATALOGS, ETC. FOR 1928

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 61 YEARS

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is **8/6.** All other places, **10/6,** post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices where copies and full particulars are obtainable) are as follows:—

HEAD OFFICE:

Bank House, Bank Place, Melbourne, Victoria

Representatives in all States and New Zealand.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

American Office: S. D. McFadden, Pacific Bldgs., Market Street, San Francisco, Cal., U.S.A.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

PERSONAL.

Appreciation is expressed by producers and others interested in the fruit industry for the services rendered by Mr. Herbert H. Smith, M.L.C., who represents the Melbourne province in the Victorian State Legislative Council. It is possible Mr. Smith will be returned unopposed at the forthcoming elections, but preliminary steps are being taken to form a Committee to secure his re-election.

Mr. H. J. Willoughby, of Tyabb, Vic., thinks that the Canadian bushel case for Apples is gaining in popularity in Victoria. Neat colored labels for the ends of cases are deemed to be an advantage.

SHOWS TO COME.

Victoria.
Diamond Creek—March 10.
Somerville—March 14.
Red Hill—March 21.
Bendigo—April 27-28.
N.S.W.
Sydney Royal Agricultural Show—April 2-11.

Glasgow had an "Apple Week" in December last, when Canadian Apples were emphasised.

Science: Agriculture: Business.

Assisting Fruitgrowers to Secure the Full Benefit of Their Toil.
Valued Experiences in U.S.A. and Helpful Suggestions for Australia.
(By R. E. Boardman.)

THE PRIMARY INDUSTRIES of Australia are of major importance. On the export of our primary products depends the prosperity of the Commonwealth.

Secondary and manufacturing industries have their rightful place, and are necessary to absorb the increasing population and to provide a home market for the produce of the land.

Sir Robert Horne, ex-Chancellor of the Exchequer, stated at a public meeting in Melbourne recently that Australia would be wise to place proper appreciation on our wool, wheat, and other primary industries, particularly those which had surpluses to export, and to see to their development with as little hampering as possible.

How can needs of agriculture and the fruit industry in particular be best served?—by organisation or by legislation?

Here are four methods which are being followed with success:—

(1) The fruitgrowers—and other primary producers—organise into groups in their own districts or according to their particular products.

(2) By uniting with groups in other centres, State-wide organisation is possible; these function:—

(a) In production by securing maximum yields with a minimum of expense.

(b) In marketing, by co-operation with the wholesale and retail distributors and with the general public.

(3) Expert assistance is obtainable through the Department of Agriculture, the Horticultural Commissioners, the County Farm Advisers, and the University.

Open-air Market at Fresno, California, U.S.A. Markets such as this, also roadside markets, are regular features throughout the United States.—A useful suggestion for Australia.

Is the importance of the agriculture adequately recognised by the "man in the street"? Do farmers and fruitgrowers think of themselves as isolated units? And does not the average city dweller hear of the primary producers mostly through the airing of troubles—and they are real enough—through deputations to political Ministers?

How can agriculture best find expression for its needs, and how can the best elements of city life be brought into mutual relations and a proper understanding of the nation's basic asset?

America has gone far in answering these questions. The man on the land is losing the feeling of isolation, and the city dweller is realising the importance of there being a contented and prosperous rural population.

(4) In relating the country interests with those of the city, and in the securing of increased markets at home and abroad the efficient factor is the Chamber of Commerce.

Chambers of Commerce.

In the Chambers of Commerce the rural producers always have a friend at hand. Such organisations head up all the activities of town and country into an effective force for community benefit. The manufacturing and city businesses deal with their own particular needs and matters of policy. An integral part is the agricultural section. Here are grouped the men of business dependent on agriculture, the representatives of the producers' organisations, County Horticultural Commissioners, County Farm Advisers, principals

of the agricultural press, and all interested in primary production. Delegates from all the groups unite into a general council, thus welding the chamber into an effective force for the good of all.

Accurate statistical and other information is available on all phases of rural activity at a moment's notice. The plantings are known, also the crops over a long period. The Chamber will help to increase production on certain needed lines and check increased plantings where there is danger of over-production. National advertising campaigns to increase fruit consumption are efficiently conducted. Money is secured for scientific research. New markets are sought, new outlets for the manufacture of fruit products to eliminate waste.

Beneficial legislation is secured when desired by the producers, and projected legislation which is deemed to be harmful is examined and contested.

In every way the producers are given their full opportunity for the adequate expression of their ideals and needs, and the whole programme functions in a successful manner.

Friction between conflicting interests is reduced to a minimum, sectional operations are harmonised into a broad programme.

The ideal seems to be that of viewing the industries **as a whole** and of progressively securing benefits for all.

I was particularly pleased with the workings of the Chamber of Commerce at Los Angeles, in Southern California, where the Agricultural section is under the capable administration of Dr. Geo. P. Clements.

County Horticultural Commissioners.

During my stay in California, I was privileged to attend the annual conference of the County Horticultural Commissioners at Visalia and the Sequoia Giant Forest.

It was a picturesque setting. Away in the mountains and surrounded by California's giant redwood trees. Nearby was the famous Sequoia (redwood) tree, 5,000 years, the largest, oldest living thing in the world. I found these County Horticultural Commissioners to be men of a splendid type—trained, efficient, keen, and possessed of the spirit of service to the rural communities.

The subjects dealt with at the conference included insect and fungoid control, irrigation, standardisation, and other like topics of interest. The men came from all parts of California—a State having a coast line of a thousand miles.

The County Horticultural Commissioners have well-equipped offices in the heart of the producing centres, and they deal largely with pest control and the regulatory, inspection, and standardisation work of the Department of Agriculture.

The County Farm Adviser.

In order to secure for the producer the maximum crops per acre at the lowest possible cost, the County Farm Adviser is always at the service of growers.

The enterprise is usually referred to as the County Farm Bureau system, under which the farm advisers operate under the auspices of the local county, the University, and the Department of Agriculture.

It is the extension work of the Agricultural Colleges, the taking out to the man on the land the practical application of tested scientific experience. The farm advisers are part of the staff of the College of Agriculture; all are scientifically trained, and they act as local representatives of the College and the Department of Agriculture. Their business as itinerant teachers is to advise persons on the land who request the service. Their salaries are paid by the county, the State, and the University.

To the late Walter H. Page must be given the credit of inaugurating this service. Mr. Page started the enterprise prior to his noted service as American Ambassador to Great Britain during the war. Those great books, "The Life and Letters of Walter H. Page," should be read by all.

The nearest approach in Australia to this system is that of the Agricultural Bureau as operating in New South Wales and South Australia.

By means of the County Farm Adviser an educational programme is more easily possible. Producers must themselves qualify for securing the service by organising at least 20 per cent. of the local growers into a farm bureau, and secure an appropriation from the county to pay their share of the expenses.

There are now 41 counties in California enjoying the services of farm advisers. Each county is organised into local centres, varying from 10 to 20, which meet once a month for the purpose of discussing local, county and national problems. In California in 1926 no less than 558 centres held 10,220 meetings, with an attendance of 470,000. There were 2,000 other meetings, with an attendance of 54,000.

Helping the Women.

Attached to the office of the farm adviser there is a lady, who is termed the Home Demonstrator. Meetings of women are organised, and some of the matters dealt with include dressmaking, shoes and the care of the feet, colours for tinting and dyeing, growth and development of children, cooking, and the use of vegetables and cereals in the diet, preparation of school lunches, care of children's teeth, and child culture generally.

The whole system is working well in assisting producers to obtain more per acre, with reduced expenses; to improve grade standards; to improve the social and community life; to assist and encourage the womenfolk and the children, and generally to win more prosperity and contentment for the primary producers.

Australia can surely adapt such a programme in assisting the pioneers and the sturdy folk on the land.

Much has yet to be done to develop the vast resources of the Commonwealth, and it would appear to be sound policy to commence in the country districts, linking up with the other means above described to secure for the producers a richer social and industrial life and the due proportion of wealth for their steady toil.

FRUIT TREE STOCKS.

Seedling Stocks Unsuitable for Apples.

Queensland and Tasmanian Growers Warned of Woolly Aphis Menace on Roots.

INTEREST in the question of fruit tree stocks has been reawakened by the article in the January "Fruit World" under the heading of "Reliable Trees," by Mr. F. Thomas, M.A., of Bunyip, Victoria.

Mr. Thomas quoted from the experiences gained at the East Malling Research Station, Kent, England. There seedling stocks proved variable and unreliable, and they tested out fourteen distinct types of "Paradise" stock, and convinced nurserymen and fruitgrowers as to the merits of one particular type of Paradise stock, which has now become the standard: layering is the method of propagation.

An experienced nurseryman, Mr. Oscar Nobelius, of Narre Warren, Victoria, points out in a letter to the Editor of the "Fruit World" that experience has proved the Paradise and Crab stocks to be unsuitable for Australian conditions.

The Northern Spy has proved so far to be the stock par excellence for Apple trees. Mr. Nobelius continues:

"Victorian nurserymen are not growing Apples on seedling stocks; it would be madness to do so.

"Seedling Apple stocks as are being planted in Queensland and Tasmania, are going to give very unsatisfactory results, and I am quite sure many growers will be very sorry that they ever saw them.

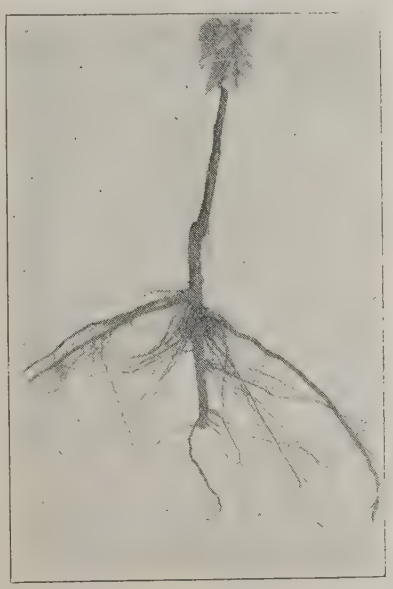
"Here are two photographs:—(1) Northern Spy stocks, one year transplanted. (2) Seedling stocks, exactly the same age. These seedlings when lifted were a mass of woolly aphis. If examined closely you can see the small knots caused by the aphis. How could they possibly make decent trees?

"With the Northern Spy, you will get 100 or 1,000 trees with the same habit of growth, and if put in suitable ground, well drained where necessary, the result is assured. In the Tamar Valley, Tasmania, many orchards were planted on most unsuitable land. They proved in many cases rank failures, and, of course, something had to take the blame. Some people attribute failure to the Spy stocks. This is very unfair. Where the Spy stock failed, I am quite sure the seedling will also fail. Unsuitable and undrained land are the two chief causes of orchard failures.

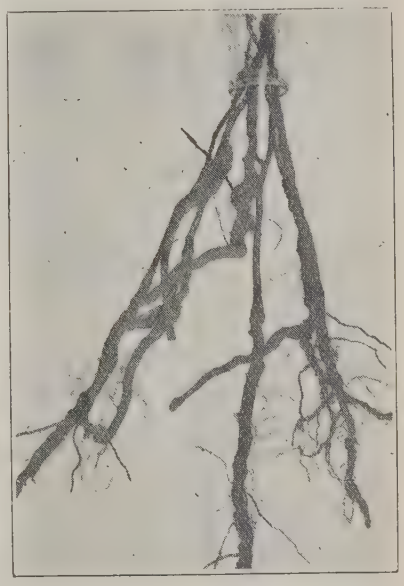
With the seedling you will get 80 per cent. different habits, just as Mr. Thomas' article proves.

"The only way to get a seedling stock is to get a proved one (and that will take 40 to 50 years). Then you would have to raise a stock from that one tree, just as was done in 1871 with the Northern Spy. Growers of that time are determined not to go back to the seedling after the experience they had.

Mr. J. D. Grant, of Tyabb (Vic.), writes:—"When I was a boy at school I can remember my father getting some Northern Spy wood, which we grafted and tied wire about the roots, so as to force the Spy to make its own roots. The first tree grown on Spy is still alive. Before the Spy stock, I can remember taking all the Apple trees when lifted to the water-hole and washing the woolly aphis off the roots, then cutting off all the knots (caused by the aphis) with a knife—secateurs not then being in use.



Northern Spy Stock, One Year Transplanted. Note the clean fibrous rooting system.



Three Seedling Apple Stocks—A Mass of Woolly Aphis.

"No grower who saw the trees in those days would ever dream of going back to it. I still have a tree on seedling stock in my orchard, and, although bigger than those on Spy, it never bears as much, and they are not as good quality."

Mr. Searle, Senr., of Queensland, told me that he gave up growing Apples on seedlings, and when the Northern Spy came in it was a revelation in Apple-growing.

Mr. T. H. Grant, of Beaconsfield (Vic.), says that Mr. Thos. Lang introduced the Northern Spy in 1871. The first cuttings were root grafted at the Royal Horticultural Gardens, Burnley, by the late J. T. Jones and himself, then a boy of 16. Many years later, when at Toomuc Valley, he raised 4,000 seedling Apples. There were nearly as many different types in roots and heads, and not 10 per cent. were blight-proof. It would be impossible to make an even plantation of trees worked on seedlings. Scarcely two would be alike. There may be better stocks than Northern Spy, but it will take many years to prove and test them. There are trees at the Toomuc Valley orchard on Northern Spy fifty years old, and they are showing no signs of declining vigour or production.

Mr. George Douglas, Harcourt (Vic.), reports:—"We have an orchard 25 to 40 years old on Spy. They are growing strong and bearing heavy crops. Many trees bear 20, 25, to 30 bushels, while 10 to 15 bushels per tree is a common crop. I have Rymer and Stone Pippin bearing 40 to 50 bushels. I do not see anything wrong with the Spy stock."

Mr. Jas. H. Lang, Harcourt (Vic.), writes:—"Although our present stocks may not be ideal for all varieties, it is folly to talk of abandoning the blight-proof. It is difficult enough to deal with woolly aphis above, without

it under ground. I still have Apple trees on seedling stocks 60 years old doing well, though a large number have gone out, and trees on blight-proof stock replaced them, and compare in size very favourably with them.

"A few years ago at Franklin, Tasmania, I saw some 15-year-old trees on seedling doing better than on blight-proof, but as far as Victoria is concerned there is no stock in sight that is an improvement on the Spy. Without blight-proof stocks it would be impossible to carry on a nursery. This is the experience before, and I don't think any remedy since discovered would relieve the situation."

Mr. T. Russell, Kinglake (Vic.), states:—"If anything better comes along, give it a trial by all means, but to go back to seedlings is out of the question. There may be patches of soil where aphis does not trouble the seedling much, but there is very little of it. I really do not believe the growers of this State would have a tree on seedling they would be up in arms against it at once. All the older growers know what it is, and no one would ever persuade them to plant on seedlings again. We have a good variety of fruit tree pests, and they all come to stay, without the roots being covered with woolly aphis."

Mr. J. W. Lawrey, Yarra Glen, writes:—"Re Northern Spy stock. Until we have something better we cannot work trees on anything else. That is, we cannot afford to. If Queensland or any other Government advanced us the money, then we could grow on seedling, and they would have to take the risk; if we took the responsibility it is quite safe to say that they would be condemned.

"The latest is that the Queensland inspectors condemn Apples on Spy stocks because they will not make a commercial tree. I have no hesitation in saying that to use any other than a blight-proof stock is madness."

Mr. L. J. Wicks, Highbury, South Australia, writes:—"In South Australia the Spy has given splendid results almost wherever it has been planted, and consequently there has never been any serious question as to stock."

At a meeting of the Nurserymen's Association on 15th November, 1927, Mr. J. M. Ward, Superintendent of Horticulture, said that he had never advocated seedling stocks for Victoria, but had done so in Tasmania and Queensland, and referred to the satisfactory results from seedling stocks. His whole object was to have this matter investigated with a view to arriving at a decision as to the best fruit tree stocks available. He referred to the experiments which were being conducted at the East Malling Experiment Station in England.

I am sure there are other nurserymen and orchardists who should be heard on this question and who should acquaint the fruitgrower with a little of the trouble that they have had in testing and trying other stocks.—Oscar Nobelius, Kia Ora Nurseries, Narre Warren.

CODLIN MOTH CONTROL.

Oil as a Spreader for Lead Arsenate.

Victorian fruit canners, particularly those in the Goulburn Valley, have found that unfortunately a number of growers have been neglecting the standardised spraying programme for the control of the codlin moth. The codlin moth is very susceptible to weather conditions, and because we cannot accurately forecast the weather, measures must be adopted to insure clean fruit.

The "Calyx" spray to-day, is generally accepted as a true form of insurance: that is, the fruit is to be sprayed before the calyx has closed, the second application should be made from two to three weeks after. The third application three to four weeks after the second; care being exercised to see that the fruit has been completely covered.

At tests recently conducted in various parts of the State, a specially prepared spraying oil was found to be an efficient spreader, carrying the tiny particles of arsenate of lead over the whole surface of leaf and fruit. It appears as a bloom on the fruit when dry.

At Shepparton, on Mr. Fairley's "Fruit Vale" orchard (under the care of Mr. E. Earle), the codlin moth has been reduced to less than a quarter of one per cent., whereas in previous years there was a heavy loss through codlin infestation. Again, the red spider has been completely controlled. Similar tests on the Mornington Peninsula, Southern Victoria, have been equally successful, while at Harcourt, Apple trees of the Anne Elizabeth variety, which were badly infested with red spider, were completely cleaned up without any damage of any character whatever to the fruit or foliage.

The canning authorities are considering the necessity of having to use pressure on growers concerning their control programme for the codlin moth, on account of the amount of fruit that has to be rejected.

It is suggested that each fruitgrowing district should arrange for a miniature insectarium. This is a simple contrivance of a small wooden box with a glass pane and gauze top. The appliance is placed in the fork of a tree in the orchard, the late brood of the codlin moth is placed on the floor of the box, which is sprinkled with bran and pollard. This acts as a protection for the embryo over the hibernating period, and when the young moth is emerging from the cocoon the grower knows that the first brood is on the wing, and his programme can then be efficiently mapped out.

Oil Spraying Tests.

It was interesting to observe results of spraying tests in the Shepparton district, with a new base oil. American research chemists have, during the last three or four years been experimenting with the medicinal type of paraffin oil. While in America, Mr. W. H. Murray, of the Vacuum Oil Co., obtained an amount of data from those interested at the various Universities, and during the last two years has been experimenting with oils of this type in the various centres. During the year 1927, experiments were carried out in the principal fruitgrowing areas throughout the State, from Mildura to the Mornington Peninsula.

In the Shepparton area, two large Citrus groves were sprayed with this product.

The sprayings were made just about the blossoming period, which is considered a very risky process on Citrus trees. The trees were badly infested with both red and olive scales. Though over three months have elapsed since the spraying, examinations of these trees have failed to find a single live scale. On the other hand the trees have responded by clean, vigorous growth. The oil also has been used as a spreader for arsenate of lead, the idea being to ascertain whether the oil would act as ovicide. Peach trees in full blossom were sprayed with oil without suffering damage; instead, nice crops of fruit have been picked. On oil-sprayed Pear trees the crops were noted to be abundant and clean.

Results of the work have been satisfactory, and enquiries are coming from all over the Commonwealth for further details of this product. So that nothing will be left to chance, Mr. Murray, with the co-operation of many prominent growers, is carrying on further tests of considerable magnitude, so that all data necessary will be compiled.

The Australian Pomological Committee Should Be Reconstituted.

THE AUSTRALIAN POMOLOGICAL COMMITTEE. What has become of it?

A few years ago, when the Australian Fruitgrowers' Conference held its appreciated sessions in the several States, there were also meetings of the Australian Pomological Committee—a representative body of fruitgrowers, nurserymen, and Government experts.

The Pomological Committee set about classifying varieties, reducing names where more than one was in use for the same fruit, checking up new varieties, and encouraging men in their search for new varieties of merit.

Useful work of far-reaching importance was thus performed, and it is highly desirable that the Pomological Committee should be reconstituted and continue its valued activities.

For several years the secretary of the Pomological Committee was Mr. E. E. Pescott, F.L.S., Pomologist of the Victorian Department of Agriculture. Here is a statement recently compiled by Mr. Pescott, showing some of the work of Australian hybridists and plantsmen:—

AUSTRALIA IS DEVELOPING her own types of fruit—fruit suitable to our soils and climates, fruit of types much needed, and fruit certainly of a desirable character. The world, too, will soon learn the value of our new fruits.

In **Pears**, we have produced several specially fine types. One of the best is Packham's Triumph, a seedling from William's Bon Chretien, or Bartlett.

Selected by Mr. Packham from hundreds of seedlings, it stands alone as a luscious, juicy, well-flavoured Pear, keeping for a fortnight when fully ripe. Twyford Monarch, one of the Cole Pears (Victoria), as are also Winter Cole and Madam Cole, are all high quality fruits. Twyford Monarch is without exception the finest and richest quality Pear I have ever tasted. If it has a fault, it is that the Pear grows rather to a large size. And almost second to it is the richly flavoured Tasmanian Pear, Bakehouse's Bergamot.

In **Plums**, Cole's Blue Superb also is of high quality. It is a large, fleshy blue Plum, very sweet and meaty. One year I had over one hundred different Plums dried, and the best Prune of all was this Plum. As a tree it grows rather straggly, otherwise it is a Plum par excellence.

There are many Australian-raised **Peaches**, and attention is now being largely paid to canning types. Such are Pullar's Cling, Goodman's Choice, and many others, which are now largely planted in the Peach belts.

In **Cherries**, we only have to mention Eagle and Bigarreau Twyford, among others.

In small fruits, Melba and Sunbeam are our main crop **Strawberries**; white Exton Late in **Raspberries**, fills a gap in the ripening season, which has extended our season for a fortnight, or three weeks longer than previously.

And then last, but not least, we have our dozens of Australian-raised **Apples**. Bismarck is perhaps the only one known abroad, and this is not really one of our best. Dunn's, one of our good export Apples, is a high quality and good-looking Apple. There are also Schroeder, the Carringtons, Statesman, Shepherd's and Tasma, all of which are now largely grown.

Lastly, there is the great Australian Apple, Granny Smith—a fine, oval, greenish-yellow Apple, juicy, sweet, and long-keeping, a seedling from French Crab. Granny Smith is winning in favour and in acreage every year.

A short time ago, a Danish fruitgrower spent nearly two years in the Apple-growing districts of our south-eastern States. He came for experience with a view to adapting this experience in Denmark, and so improving Danish methods. On his return to Denmark he took with him a dozen young trees of Granny Smith, telling me that if he could make this Apple succeed in Denmark, it would be the finest thing he could do, and it would incidentally help to make his fortune!

Thus are Australian fruits making their way in the world, and thus shall we go on to prominence and prosperity.

WHAT IS A "COCKY"?

AT A RECENT MEETING of a Melbourne Labour Union, a resolution was adopted criticising the Government in Victoria for passing the "Moratorium" Act as "toadying to the cocky."

The "Moratorium" Act is not here under review, but we take strong exception to the terms of contempt regarding primary producers. The word "cocky" is used not infrequently as a pleasantry, but for an assembled body of men to introduce the word into a motion for record and for publication is entirely out of place, conveying as it does an air of superiority on the part of the labour union. In other words, "we are respectable Billstickers, and should run this country, no matter what a few unimportant 'cockies' in the bush may think."

There is, unfortunately, all too much of the spirit of sectional interest and class legislation. Australia's name has been besmirched abroad because of strikes and labour troubles.

It is to be hoped that the conference called by the Prime Minister to bring about a better understanding between capital and labour will be productive of great good, and that this young country will realise the importance of the community spirit, the mutual relations between capital and labour, and the co-operation of country and city, so that the nation may step forward in the march of progress.

THE FEDERAL ARBITRATION COURT.

Is It Doomed?

THE FEDERAL COURT of Conciliation and Arbitration, which has proved to be a great burden on primary producers, as on all sections of industry, has come under the searching glare of public criticism. There is strong conviction among employers and employees that the scheme is a failure.

Years ago it was heralded as the dawn of a new era, and Australia took credit for leading the way in this matter. But no country in the world has followed our example; and instead we have been held up to ridicule. Instead of preventing strikes, it aggravated and increased them. State and Federal awards overlapped, causing confusion and loss to all except the lawyers.

When fruitgrowers and other primary producers were brought under the power of the Federal Arbitration Court, much bad feeling was aroused (a most regrettable circumstance); large sums were spent in litigation, and in the end fruitgrowers were left with the feeling that they had been unfairly treated.

The idea of settling delicate points in court, with a bewigged and often inexperienced judge presiding, is wholly incongruous. The spirit of conciliation is destroyed long before the parties come into court. The discussions are often academic, and not practical. The decisions are binding on the employers only, for if the employees do not accept the award they can snap their fingers at it and take other means of securing their ends.

It would appear that the time is not far distant when Australia will have learned another national lesson, and that this unwarranted and harassing piece of legislative machinery will be scrapped.

HEAVY FRUIT CROPS.

Increased Fruit Consumption Would Solve Growers' Problems.

THERE IS A HEAVY CROP of fruit in most parts of Australia. With a bountiful season the prices to producers are not high. Already there has been much wastage with Peaches and Pears and Plums. Apples now are plentiful and cheap.

Can anything be done to increase the consumption of fruit, thus assisting the producer and benefiting the general public?

At such a time the benefit of having an organised body to speak for the growers is evident.

The necessity for there being a cordial spirit of harmony between the producers, wholesale and retail distributors, and the general public is quite apparent. Because of such harmony in America and England, big fruit advertising campaigns have been organised.

By first strengthening their local associations, the central or State associations of growers are enabled to function more effectively.

If possible, a fund should be raised for advertising. A small sum per case would yield enough money to organise the campaign. The advertising fund could be collected through the fruit agents. The wholesale and retail trade would also give their support.

By enlisting the goodwill of the people, the services of many organisations would be made available. The Housewives' Association, the Commercial Travellers' Association, Horticultural Societies, suburban and country Progress Leagues, Chambers of Commerce, Municipal Councils, and other bodies.

Government departments could be relied on to respond to any appeal which was reasonably representative of the industry.

Educational health propaganda regarding the value of fruits could be conducted by lectures, the press, and by wireless.

Australia already possesses a noted champion for health propaganda in Dr. Geo. E. Payne Philpots, who has been doing valued community work of this nature in an honorary capacity for over 10 years. Dr. Philpots is a talented and pleasing lecturer: he is well informed: his transparent sincerity is always impressive to his friends and his public audiences.

Fruitgrowers would obtain a capable advocate for increased fruit consumption if they could secure the services of Dr. Philpots for a period. People would not only be told to "eat more fruit," but the reasons why they should do so.

Victorian fruitgrowers are not making full use of their opportunities in relation to Garden Week. This is a big State-wide function, held every Autumn in Melbourne. (Displays are frequently held in the Spring as well, and these could serve the citrus growers.)

Garden Week leads up in a monster display of flowers, fruit, and vegetables at Wirth's Park, just over Prince's Bridge, Melbourne, and draws thronged attendances. So far the function has lacked regular support from the fruitgrowers, and the shows have proceeded largely as a floral display. But all the facilities are there for fruitgrowers to avail themselves of this excellent means of advertising.

Garden Week will be held this year from March 27th to 31st, and will be opened by His Excellency the Governor-General, Lord Stonehaven. The manager is Mr. R. E. Boardman, c/o "Fruit World," Bank Place, Melbourne.

In the discussion of many problems of production and organising in relation to the fruit industry, there is sometimes a danger of overlooking the major item. This is:

To increase the fruit-eating habit among the general public.

Get the people to eat more fruit, in the homes, in hotels and restaurants, along the wayside—and the problems of the growers would be solved.

Dr. Philpots, in a letter to the Editor, stated recently:—

"From careful observation, I am convinced that every person needs at least 10lb. of fruit per week—some fresh, some cooked. This is apart from canned and dried fruit.

"For this desirable and necessary health reform there is not sufficient fruit grown in the Commonwealth."

It is in the hands of the growers, through their local associations, to solve their present problems and build up permanent prosperity for the future.

Dried Fruit Department

DRYING SULTANA GRAPES.

IN November, 1927, the producers, packers and market representatives of the dried fruit industry in joint conference unanimously decided that a reduction in the number of types of dried sultanas was essential for successful marketing. They therefore requested the Council for Scientific and Industrial Research to issue standard recommendations in order to standardise the three principal processes used in Australia for drying Sultana Grapes; and accordingly a bulletin has been prepared by Mr. A. V. Lyon, M.Agr., Sc., officer in charge of the Commonwealth Viticultural Research Station, Merbein, and is now published by the Council under the title of "Standard Methods of Drying Sultana Grapes in Australia."

After outlining the general factors affecting the quality of dried fruits, Mr. Lyon deals in detail with the boiling dip, the modified temperature caustic dip, and the cold dip, treatment of dipped fruit, special equipment, and circumstances affecting the choice of dips. The following summary of his remarks may be quoted:—

1. The Boiling Caustic Dip.

(a) Prepare a solution containing 2½lb. of caustic soda per 100 gallons of water.

(b) Test the efficiency of this dip by trial at boiling point. An immersion of one and a half seconds should be sufficient to remove all bloom, and slightly crack some of the berries.

(c) If not effective, add caustic soda progressively at the rate of ½lb. to 100 gallons of dip solution, until the desired results are obtained. Excessive cracking indicates that the concentration is too great, and it causes "stickiness" after packing. Testing is necessary after all additions.

(d) All dipping (including testing) should be done at the boiling point.

2. The Modified Temperature Caustic Dip.—

(a) Prepare a solution containing 3lb. of caustic soda per 100 gallons of water.

(b) Test the efficiency by trial, at 190 degrees to 196 degrees F. If effective, the bloom is entirely removed from all berries on an immersion of one and a half seconds. Removal of bloom may be accompanied by slight cracking.

(c) If not effective, add caustic soda progressively, at the rate of ½lb. per 100 gallons of water until the desired results are obtained. Testing is necessary after all additions.

(d) All dipping, including testing, should be done at a temperature of 190 to 196 degrees F.

(e) Spraying with the cold dip solution is essential during bad drying weather and preferable in normal weather. This does not materially alter the characteristics resulting from the dip.

3. The Cold Dip.—

(a) Prepare in the dip tank the required volume of solution containing 1lb. carbonate of potash to two gallons of water.

(b) Add olive oil emulsion equivalent to one and a half pints of oil to 50 gallons of solution.

(c) Test by immersing the fruit for four minutes. If efficient, the bloom will be wholly removed, and an oily coating substituted.

(d) If not satisfactory, add oil emulsion progressively, at the rate of ½ pint of oil per 50 gallons of water. until an effective test is obtained.

(e) Add an excess of emulsion equivalent to ½ pint of olive oil to 50 gallons dip solution before using.

(f) Continue in use until slight traceries of bloom appear on the dipped fruit. Then add excess of emulsion as in (e).

(g) Additions of carbonate solution are made as a solution at original strength (1lb. to two gallons of water), and entail further testing and additions to oil emulsion before using.

(h) The fruit should be sprayed with the "cold dip solution" at the third day, and thereafter at intervals of three or four days. A special spraying should be applied during or immediately after rainfall.

4. General.—

(a) Fruit should be spread as soon as practicable after dipping.

(b) Quick drying improves quality. Therefore effective dipping and thin spreading are essentials.

(c) Removal and particularly bundling of partially dried fruit invariably results in a multi-coloured sample, due to deterioration of individual berries to a varying degree.

(d) Bleaching of cold-dipped fruit should precede final washing, as otherwise regulation of moisture content is not possible.

(e) Thin spreading for exposure on hessian is essential for uniform results.

(f) The cold dip and the modified temperature caustic dip give best results in early and mid-harvest period and with fruit of good quality.

VITICULTURE.

Beware of Downy Mildew.

In view of the recurring showers, vinegrowers should take further precautions to prevent an outbreak of the vine disease known as downy mildew (states the Victorian Horticultural Superintentent (Mr. J. M. Ward).

Many growers fail to realise the danger, but the Government Viticulturist (Mr. F. de Castella) points out that even at this late stage grave damage may occur to unsprayed vines. It only needs falls of rain at suitable intervals for complete defoliation to result. This would prevent the present crop from ripening and compromise next season's crop. Vines that end the season "under bare poles" have a poor show of fruit the following Spring.

The copper of earlier sprayings has now mostly disappeared, and the leaves that have grown since are quite unprotected. All vines that have not been recently sprayed should be treated without delay. Sprays that do not mark the Grapes are to be preferred at this late stage; they should be directed, as much as possible, to the leaves, which are now the most vulnerable organs.

Downy mildew has been reported from Albury (N.S.W.), and it has been identified with certainty on a few leaves near Shepparton (Vic.). It is a fatal mistake to await the finding of downy patches in the vineyard before spraying. It is then usually too late to save the foliage.

N.S.W. DRIED FRUITS BOARD.

THE first meeting of the New South Wales Dried Fruits Board was held at Leeton, M.I.A., on 15th February. The Board consists of three members—the Government nominee and Chairman, Mr. G. J. Evatt, Water Conservation and Irrigation Commissioner; Mr. W. M. Nulty (Leeton), representing the M.I.A. growers; and Mr. H. R. Sloan (Curlwaa), representing all other growers in the State. The Hon. T. Paterson, Minister for Markets, who was in Leeton at the time, attended the opening of the meeting, and wished the Board every success.

It was decided to request the Water Conservation and Irrigation Commission to allow Mr. G. A. Try, the Commission's First Clerk, to undertake the duties of Secretary to the Board.

Levy on Growers.—The Act provides for the imposition of a levy on growers to defray the expenses of administering the Act, and the Board decided to adopt a levy at the rate of 1-16th penny per lb. on the quantity of dried fruits produced by each grower in the year to which the levy applies. Draft regulations dealing in detail with the imposition and collection of the levy, etc., were considered by the Board, and it was resolved to submit them to the Attorney-General for advice as to whether they were in accordance with the provisions of the Act.

Export Proportion.—The question of recommending what proportion of the 1928 N.S.W. output of dried fruits should be exported was deferred for further consideration at the next meeting.

Registration of Growers, Packing Sheds and Dealers.—Draft regulations on the lines adopted by the Dried Fruits Boards of other States were considered, and referred to the Attorney-General.

Grading and Packing.—The regulations adopted by the Victorian Dried Fruits Board and the Commerce (General Exports) Regulations of the Commonwealth Department of Markets were considered, and deferred for further consideration.

Other matters dealt with included: Revenue and finance; appointment of inspectors; effect of the High Court decision in the case "James v. State of South Australia"; amendments to the Dried Fruits Act similar to those recently made in Victoria and South Australia; suggestion by the W.A. Dried Fruits Board that the cost of delegates' expenses to conferences be pooled by the various State Boards.

The next meeting will be held in Melbourne on March 5th.

MARGETSON & CO. LTD.

Fruit Importers & Salesmen

30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House.
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL
Head Office—Covent Garden Market, London, W.C.
Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand.
London, W.C.

Shipping Nos.
431 and 432

THE WHITE SERVICE AT CARDIFF.

In fulfilment of their programme to offer the widest possible service to Australian and N.Z. fruitgrowers, the White Service have opened at Cardiff, England, by concluding negotiations with the old-established firm of William Morgan and Co., of Cardiff. The business is now carried on under the style of Morgan, White & Co., fruit brokers, Cardiff. The business will, as heretofore, be under the management of Messrs. W. T. Banbury and C. Peters.

The port of Cardiff is the natural distribution centre for the densely populated industrial area of South Wales. It is felt that the result of this new association will be to add very considerably to the distributive facilities which the White Service has offered to clients in the past.

Acknowledgment.—We acknowledge having received from Captain W. J. Wade, of Sydney, a copy of "Lloyd's List and Shipping Gazette," which contains interesting particulars and illustrations of Port of Manchester.

South Australia

ADELAIDE FRUIT MARKETS.

Better Distribution Needed.

The record crops of Apples and stone fruits produced in South Australia this season have proved the inadequacy of the two fruit markets at the east end of Rundle-street, according to statements made recently by prominent fruitgrowers and agents. Apples, Plums, and Peaches reached these markets three times a week in such quantities that they could not be disposed of at reasonable prices, and the balance was either cleared for what it would fetch or dumped on the rubbish tip. Plums were fetching 3/- a case at the markets, Peaches 4/- to 5/-, and Apples 2/6 for cooking and 3/- for eating sorts.

It is suggested that the establishment of kerb markets or similar distributing centres in various parts of the city would relieve the situation considerably. If householders could attend these markets and purchase their requirements direct in half-dozen or dozen lb. lots, the consumption would probably be largely increased. Better facilities for distributing to country districts were also required.

In regard to the glut of Peaches, Mr. A. O. Pike, Chairman of the S.A Fruitgrowers' Co-operative Ltd., and one of the largest growers in the Hills district, recently gave as his opinion that the only remedy for the excess of freestone Peaches was to graft the trees to other fruits, or clingstone Peaches suitable for canning.

S.A. APPLE CROPS.

Record Expected.

Previous estimates in regard to the heavy Apple crop in South Australia now seem likely to be exceeded, and it is anticipated that the record yield of 1,143,274 bushels in 1926 will be eclipsed. It is expected that between 350,000 and 400,000 cases will be exported, providing shipping space can be obtained for the larger quantity.

The Chief Horticultural Instructor (Mr. Geo. Quinn) stated recently that good crops had set in all fruitgrowing districts, and the quality generally was good. Cleopatras were uniformly heavy, Jonathans good to heavy, Dunn's light in most orchards and Rome Beauty heavy in some districts and light in others. Large quantities of S.A. Apples will be shipped to Continental ports.

Lack enthusiasm, and you lack the highest happiness.

THE NEW ZEALAND ORCHARD TAX ACT 1927.

WRITING in the N.Z. "Journal of Agriculture" on "Agricultural Legislation of 1927," Mr. F. S. Pope, Acting Director-General of Agriculture, Wellington, deals with the renewal of the Orchard Tax Act as under:—

The Act under which orchard tax has been payable since 1917 expired on 31st December, 1926. The Act of last session was passed firstly to take the place of the defunct enactment, and secondly to enable a special tax to be levied in commercial fruitgrowing districts, in cases where the growers so desire, in order to provide funds with which to combat fire-blight.

The provisions of the new Act, in so far as they relate to the general orchard-tax, are, however, somewhat different from those of the expired statute, the main points of divergence being as follows:—Formerly the tax was at the rate of 1/- per acre, with a minimum of 2/6. The new rate is 1/- per acre, with a minimum of 5/- and with an exemption for orchards of less than 120 trees. This will mean that owners of small orchards will not have to pay the tax at all. As a matter of fact, the half-crowns they paid under the old Act were almost swallowed up by the expense of collecting and accounting for them. As hitherto, the net proceeds of the general orchard-tax will be paid over to the New Zealand Fruitgrowers' Federation, for such purposes in furtherance of the interests of the fruitgrowers of the Dominion as may be approved by the Minister of Agriculture.

The special orchard-tax will operate only in those gazetted commercial fruitgrowing districts in which the Minister of Agriculture decides that it should be levied, and it must not exceed 5/- per acre. The net proceeds will be handed over the Fireblight Committee of the district for expenditure in connection with the control of fireblight, including the cutting down of hawthorn hedges, which are one of the chief means of spreading the disease, and which, in commercial fruitgrowing districts, have to be cut down in compliance with the Fireblight Act 1922.

LEMON-GROWING IN NEW ZEALAND.

A steady increase is taking place in the area planted with citrus trees in New Zealand, particularly Lemons, and satisfactory crops of good-quality fruit are being obtained.

NEW ZEALAND'S LEMON IMPORTS.

The New Zealand imports of Lemons during the five years 1922-26 averaged 1,103,000 pounds annually, practically all of which were supplied by Australia, the United States, and Italy (states the Commonwealth Department of Markets).

The prohibition on imports into New Zealand of fruits, vegetables, grains, etc., from California, during 1925 and up to September 18th, 1926, enabled Lemon shippers in Australia and Italy to capture the market formerly supplied mainly by the United States. As a result of the embargo, imports from Australia increased from an average of 284,000 pounds during the three years 1922-4 to 628,000 pounds in 1925, but declined in 1926 to 502,000 pounds. Imports from Italy increased from an average of only 33,000 pounds in 1922-24 to 472,000 pounds in 1925, and 512,000 pounds in 1926.

The following table gives the imports of Lemons into New Zealand during the past five years:—

From	1922. Pounds.	1923. Pounds.	1924. Pounds.	1925. Pounds.	1926. Pounds.
Australia	282,948	398,550	169,218	628,096	502,211
Italy	5,100	43,186	49,215	471,868	511,951
United States	619,033	668,102	731,584	3,375	423,384
Other countries ..	—	—	426	1,904	4,290
Total	907,081	1,109,838	950,443	1,105,243	1,441,836

HAMBURG
(GERMANY).

Ph. Astheimer
And Sohn,
Fruit Brokers . . and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

DUAL-PURPOSE SPRAYING.

Oil Plus Copper for Insects and Fungi.

A new spraying compound has been put commercially on the market for controlling insect pests and fungoid diseases by one operation, in the combination of spraying oil and copper. The manufacturers point out that the purpose of this spray is twofold:—(1) Labour-saving: When spraying is necessary for Black and Green Aphis on Peach trees, also Woolly Aphis, Red Spider, and Scales, the same trees must be sprayed for Leaf Curl and Black Spot. If one spraying would suffice, the saving would be considerable. Again, Spring weather, when this spraying must be done, is capricious, and the danger of losing the correct days would be lessened by reducing the spraying necessities by half. (2) The value of copper sprays for Black Spot on Apple and Pear is recognised, but unless used very early the fruit may be russeted. Wet seasons sometimes destroy the efficiency of the early spray before the blooms are opened and the spores become active. The combination of oil and copper is calculated to give greater penetration and more enduring qualities: it may be applied when the clusters are loosening before the buds are separated and the stalks exposed.

This combined spray is C.C.S. and Maccol No. 2, proprietary lines of A. H. McDonald and Co. Pty. Ltd., of Bridge-road, Richmond, Vic. The company points out that by early spraying with this preparation the young foliage is not injured: it grows luxuriantly and the treated trees stand out favourably in the orchard.

Two of the orchards in which it has been tried are those of W. C. Thomas & Sons, Tynong, where more than 100 acres of Apple trees were treated, and Mr. A. A. Board, of Pakenham, Vic., who used the spray on his most susceptible varieties. Demonstration plots were also sprayed at Drouin, Hastings, Doncaster, etc.

Should it be contended that last season was not one for a critical test, the manufacturers point out that the check trees left were so badly affected with spot that scarcely any sound fruit can be gathered from them, and that previous to these lines being marketed, they were subjected to exhaustive tests in the districts where disease is at its worst and upon varieties most open to attack.

"Who is the woman to whom you bowed?"
"My next-door neighbor."
"But she didn't return the bow."
"No; she never returns anything."

Promise little and do much.

Canning Fruit Notes.

THE SHEPPARTON DISTRICT.

DURING FEBRUARY a representative of the "Fruit World," Mr. Colin Gorrie, visited Shepparton and some of the surrounding districts. Mr. Gorrie expresses appreciation regarding the type of fruitgrowers in this district. Continuing, Mr. Gorrie writes:—

The High School Farm, situate two miles from Shepparton, is the practical centre for the Shepparton High School. It is managed by Mr. W. Gilchrist, and is well conducted.

The total area is 56 acres, of which 25 acres are planted with Peaches, Apricots, Pears, Citrus, Apples, Plums, etc. Lucerne is grown, and stud Jersey cattle are reared. Several animals from the stud are entered in the Royal Agricultural Show each year, and the sale of some of them helps to run the farm at a profit.

The Pears are bought by the railways, and the rest of the fruit is sent to the Rosella Jam Co. and the Melbourne and Sydney markets.

During the week, senior boys from the High School are lectured on the practical side of the work by Mr. Gilchrist, under whose guidance they are progressing satisfactorily.

Another branch of the work is the research carried out by the Department of Agriculture. Lately they have been experimenting with Goodman's Choice Peaches for transit rot and brown rot. Transit rot, which is becoming very prevalent in this district, is estimated to cost the Goulburn Valley orchardists £40,000 yearly, hence the need for more research in this line, and the widespread publication of these results.

Mrs. E. Erwen, who has been in the district since 1900, has a large orchard—100 acres—besides 200 acres of grazing land. The orchard is planted with Apricots, Peaches, Pears, Plums and citrus.

The orchard is manured twice with pure super., and excellent results are recorded. Mrs. Erwen considers the most difficult pests to cope with are the codlin moth, for which she sprays, and the Rutherglen fly, which is removed with smoke fires.

Mr. M. Bloumis, a new settler, has 45 acres at Grahamvale. Although not all that area is planted, there are several acres each of Pears, Peaches (Pullar's Cling), Plums, and Apricots.

Mr. Bloumis is experimenting with tobacco, and as a result has three acres of healthy plants, although excessive watering has reduced growth in some parts. There are six varieties, the main being Blue Pride, Yellow Pride, and Conqueror.

The main problem in regard to this crop is the drying of the tobacco, as fairly hot weather is needed, and here, as well as most other parts of Victoria, the summer months have not been as hot as was expected.

A new German fertiliser, containing nitrogen, made from the atmosphere, has been used with great success by Mr. C. J. Nash, on his orchard at East Shepparton.

This fertiliser, although rather expensive, is most economical in use, as one pound, applied when the tree is being irirgated, shows beneficial results in less than a week. When a tree is looking at all "sickly," a few handfuls of this manure, allowed to soak in with water, will soon revive it.

The prolific growth of all plants treated with this fertiliser cannot be credited, unless the result is seen.

(To be Continued.)

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

PEACH WEEK.

Partial Success in Melbourne.

PEACH WEEK in Melbourne was only a partial success. It is certain that large quantities of Elberta Peaches from the Goulburn Valley were disposed of that otherwise would not have found a market. The growers, however, understood that they would get 5/- per case for the fruit, which was being retailed at 5lb. for 1/-. This anticipation, however, was not realised, and the growers ceased sending. There was a press controversy on the question.

It is probable that on future occasions the preparatory work will be attended to well in advance, for there are many ways of waking up and sustaining public interest—city drapers and most other shopkeepers would, on being approached, gladly make provision for fruit displays, and would also make provision for employees to readily receive supplies.

School children and their parents could be reached in a special manner through co-operation with the Education Department. The services of the Housewives' Association could be enlisted. Lectures and health talks, including references to Peaches, could be broadcast.

An efficient crop survey in advance would be a good guide to the trend of affairs.

This would appear to be in the province of the Department of Agriculture.

Brand Your
Fruit Cases and Bags
with
CALDWELL'S
STENCILLING
INK
(In Cakes and Liquid)
QUALITY UNSURPASSED
Obtainable All Merchants
Local Agents Wanted
CALDWELL'S PTY. LTD.
Yarra Bank Road
South Melbourne, Vic.

Another aspect of the situation was expressed by the delegate from Wandin at the Victorian Fruit Council. It was then stated that many growers of choice dessert Peaches objected to the publicity given in Peach Week to the Elberta variety, which, it was stated, was not comparable to many other varieties, which came in at the same time, for dessert purposes.

THE LEETON PEACH CROP.

Reports from Leeton, M.I.A., indicate that the Peach crop is not turning out as satisfactorily for growers as was at first anticipated. Elbertas produced a magnificent crop, but owing to the collapse of the fresh fruit market, growers were forced to dry large quantities, with which operation the cool, wet weather interfered considerably.

In the intermediate clings, the exceptionally heavy setting prevented the fruit reaching the required minimum diameter of 2¼in., and some crops of Tuscan cling were left to rot. Good samples of Selma and Sims clings were received at the Leeton Cannery, but only in small quantities. Canners were accepting Golden Queen clings at 2¼in. diameter.

HAWAIIAN PINEAPPLE PACK FOR 1927.

Big Advertising Programme.

The three largest producers of Hawaiian canned Pineapple, the Hawaiian Pineapple Co., Libby, McNeil & Libby, and the Californian Packing Corporation, estimate the pack for 1927 as equal to that of the previous season, when 8,939,590 cases, or 214,550,160 cans, were packed. The production is estimated at over 400,000,000 pounds, valued at £7,000,000. Predictions are made that the 1928 pack will equal that of the current season.

Advertising Campaign.

The three companies above-mentioned are combined into a mutual association, called the Association of Hawaiian Pineapple Canners, which has just finished a £90,000 advertising campaign, and is preparing for another. In addition to the advertising which it is doing through the association, the Hawaiian Pineapple Company is conducting a separate campaign amounting to several hundred thousand dollars a year.

APPLE CANNING INDUSTRY OF U.S.A.

ACCORDING to a correspondent of the "New York Journal of Commerce," present indications are that the total Apple pack of Oregon and Washington will run more than 1,500,000 cases, and may be substantially greater than that. The total is entirely a matter of ability to secure the raw material and to get the trade to fully cover its requirements while the Apples are available to be packed.

In a period of six years the canning of Apples in the north-west of America has progressed from an experimental industry to where our territory is firmly established as the great Apple-canning district of the world. In 1920 the two States canned only 325,733 cases. By 1920 this had progressed to 1,332,733 cases, and in 1926 to 1,356,529 cases. The outlook is for a 1927 pack that will make about 1,500 car loads with a value of close to £800,000.

ENTER THE PRUNASIMMONIA TREE.

Every so often some newfangled doodad is invented, given a name which no one ever heard of before, and because of or in spite of the fact —makes a big hit on the market. Here's one now, though, with which horticulturists and canners can conjure: The Prunasimmonia tree has been invented.

The fruit of this specie is little known, since the only tree in existence is in the back yard of J. R. Sullivan, who lives near Spokane, Wash., but, according to Mr. Sullivan, is one of the most delectable ever discovered. The tree is a cross between a prune and a persimmon, and has peculiar rough bark with widely spreading branches like an apricot. The fruit is deep red, smooth skinned, and almost identical in appearance with a tomato. It is said to have the pleasant tartness of a persimmon and the flavor of a prune.—"Western Canner and Packer."

F. W. Vear

Fruit & Vegetable Salesman

Commission Agent

WESTERN MARKET
MELBOURNE, VIC.

Highest Market Rates Assured
Prompt Settlements

Fruit Grading.—There is great activity at the works of the Lightning Fruit Grader Co., of Hoddle-street, Collingwood, Vic. By the practical fruitgrowing experience and engineering skill of the proprietors, an excellent grader has been patented. This has won approval all over Australia, New Zealand, S. Africa, and other parts of the world. Several hundred machines have been recently sent to Tasmania.

The "Lightning" grader is suitable for Apples, Oranges, Lemons, Pears, etc.

The cable from London published by the Minister for Markets, Mr. Paterson, stating that extra care must be taken with grading this season, because of the heavy supplies, has caused the "Lightning" fruit grader to increase its efforts to cope with the demand for grading machines. A heavy demand has set in, and the firm is working at high pressure to give deliveries.

NOTES IN BRIEF.

A heavy crop of Citrus is expected in Queensland this season.

The importance of growing Bananas on only first-class land is stressed by our Queensland correspondent.

Concerted action is necessary to check the spread of fruit fly from one district to another.

Now is the time for propagation by budding young stock or headed-back trees.

Standardisation of fruit should commence by a reduction of the number of varieties in orchards.

The autumn crop of Passion Fruit promises well in Victoria.

The early estimate of Tasmania's Apple crop, 3,750,000 bushels, may be exceeded, but this will be largely governed by the amount of waste. The fruit, however, is, on the whole, very good.

Planing machines in Tasmania have greatly improved the appearance of fruit cases.

A development in the Tasmanian Apple export trade is the extension of the Port Huon wharf, allowing overseas vessels to load Apples direct for the U.K., thus saving the handling and expense of transference to Hobart.

Since the Development and Migration Commission has inquired into hail insurance on fruit crops, several insurance companies have come forward with proposals to growers.

As Sydney is over-supplied with Apples and stone fruits, there are heavier bookings on the late boats for U.K. and the Continent.

A new patent case, giving lateral and vertical ventilation, is being tested in Tasmania this season.

From the recent census of Citrus trees, it is estimated that S. Africa will double her production of Citrus fruits within a relatively short period. The export trade to England and the Continent is being specially catered for.

CANADA'S APPLE INDUSTRY.

Apple orchards in Canada cover over 200,000 acres, and the annual production from these orchards has an estimated value of £40,000,000. The crop returns from 3,250,000 to 4,500,000 barrels annually.

New South Wales

Orchard Operations - Organisation - District Notes.

Orchard Notes for March.

THE GROWERS of the late deciduous fruits in the inland and tableland areas will still be employed harvesting their crops.

In respect to common storage, attention might be drawn to the open store shed. It has been noticed both at the experiment farms and in private orchards in cool tableland districts that late-keeping Apples, such as Granny Smith, when stored in the open, but protected from the rain, and situated on the cool side of a building or a cutting on the side of a hill, or protected by thick, tall trees so that the sun never reaches the stack of cases, the fruit keeps in fresher condition than Apples picked at the same time and from the same block of trees, but stored in a walled building.

A comparatively cheap and cool open shed can be constructed of rough timber, giving only a slight pitch to the rafters; then across the rafters place saplings (boughs and all) close together. On this place a thick covering (5 or 6 feet deep) of straw, piling the straw higher at the ridge to throw the water off and then thatching the whole. The shed should be high, so that the lowest part does not come closer than within a couple of feet of the highest cases of Apples in the stack.

If the shed cannot be given sufficient eaves (which is preferable) to prevent the sun from striking on to the cases stacked within, a thatched screen should be placed on the side or part of two sides to protect them. The cases should not be stacked close to this screen, but a foot or so should be allowed to admit of a current of air. It is a great advantage to have the shed protected from the sun by tall thick trees or a high, steep hill.

As protection from mice or rats, a cage or safe of fine-mesh wire (or, better still, wire gauze, as the latter will be helpful in moth control) should be built inside the shed. The netting or gauze should extend over the top, and the floor would also need to be rat or mouse proof to prevent burrowing underneath.

It is most important that fruit picked during the heat of the day should not be stacked till cooled off. It will be found to cool off best if left in the open overnight. To do this, it can be stacked in the shade in a very open temporary stack and only placed in the shed early the next morning before the sun strikes it.

Pests.

Fumigation can still be successfully carried out for scale on citrus trees. As a rule, during the busy part of the fruit season woolly aphis is necessarily neglected, and a thorough clean up of the trees given as the foliage thins out in the Autumn. But no grower can afford to neglect any seasonable detail of codlin moth control, even during the busiest part of the fruit season.

Cultivation.

In our drier districts, where the normal rainfall is only about sufficient for the trees, and where water for irrigation is not available, it is not wise to sow a green crop for ploughing under. But it is a good plan to give an early Autumn ploughing, leaving the land in the furrows so that it will allow any rain that falls to soak in quickly.

As the days are shortening and the sun is not so fierce, evaporation becomes less and cultivation can be eased off. In districts of ample rainfall, or where irrigation can be practised, leguminous green crops, such as field Peas or tick Beans, can be sown as a green manure crop.

Preparation for New Plantings.

If the land intended for new planting is in fit condition for ploughing and subsoiling, it is a good plan to have the work done as early as possible, as moisture is thereby conserved. The soil is also put in a condition in which it will absorb any rains that fall, and thus no hold-up will occur at planting time through the land being too dry.—(W. J. Allen and W. Le Gay Brereton in the N.S.W. "Agricultural Gazette.")

YANKO, COLOMBO, AND BILLABONG CREEKS WATER TRUST.

Mr. Thorby, Minister for Agriculture (who is also Chairman of the Water Conservation and Irrigation Commission) announces that the construction of the Yanko Creek Weir is nearing completion. This weir has been provided for the purpose of diverting water from the Murrumbidgee River to ensure a constant flow down the Yanko, Colombo, Billabong, and other effluent creeks. These total some 600 miles in length within the boundaries of the Trust District, the area of which is estimated at 950,000 acres.

The weir will be so operated that a certain proportion of the flow passing Narrandera will be diverted into the Yanko Creek, and it is anticipated that this will provide a constant flow in the Creek to Moulamein, where the creek junctions with the Edward River. Suitable regulations will be framed with regard to the proportion to be diverted, and assuring also an adequate proportion to be allowed to pass down the river below the weir.

The "Water Act, 1912," provides that prior to completion of the work, Trustees be appointed, and having regard to the importance of this weir, it was decided that there should be five Trustees, two to be appointed by the Water Conservation and Irrigation Commission, and three to be elected by the ratepayers. Messrs. J. E. Slade and H. C. Fry, officers of the Commission, holding the positions respectively of Chief Survey Draftsman and Executive Officer for Water Rights, and Resident Engineer, Deniliquin, have been appointed by the Commission, and Messrs. J. H. Patterson, Jr., Otway Falkiner, and H. S. Schellick, have been elected by the ratepayers. The first meeting of the Trustees is to be held at an early date to consider various important matters in connection with the administration of the Trust, including the striking of the necessary rate to meet payment of instalment of debt to the Crown, and expenses of administration.

N.S.W. FRUITGROWERS' FEDERATION.

Mr. G. H. Wilson Appointed Organiser.

Mr. G. H. Wilson has been appointed organiser to the Fruitgrowers Federation of N.S.W. Mr. Wilson has been actively associated with all movements of importance in the industry during the past eight years, and includes amongst his other qualifications five years on the board of management and a term as one of the Vice-Presidents. Mr. Wilson has a very extensive knowledge of the fruitgrowing industry in all its phases.

A capable organiser, Mr. Wilson has the credit of rallying eighteen associations to the Federation during an intensive campaign in an honorary capacity last year. This is an achievement of no mean order, as the Hawkesbury, from which he hails, now lays claim to almost complete organisation.

Mr. Wilson served in the Boer War, Zulu Rebellion, 1906, and the Great War, besides being in several native expeditions in South Africa.

(See also Page 115.)

Go as far as you can see, then see how far you can go.—A. R. Erskine.

BROWN ROT OF APPLES

History and Treatment of the Disease

The following interesting article by Mr. H. Wormald, D.Sc., A.R.C., Sc., of the Horticultural Research Station, East Malling, Kent, England, should be of interest to Apple producers in Australia:

"In recent years, the Brown Rot disease of fruit, caused by **Sclerotinia fructigena**, has been very prevalent. The disease was particularly severe in 1926, and it was not only common on Apples and Pears, the usual hosts of this fungus, but considerable loss in the Plum crop resulted from infection by the same parasite. (A closely related fungus, **Sclerotinia cinoroa**, also causes Brown Rot of Plums and Cherries; in addition to causing fruit rot, it infects the flowers and so produces blossom wilt.)

So far as is known, primary infection of the fruit by Sclerotinia fructigena takes place only through wounds, such as those caused by biting insects, but, when one apple of a cluster becomes infected, the disease can extend from that apple to those touching it, across the points of contact. The fruit may be infected when young and growing, and also at maturity, while infection may also take place at the time of picking or during the subsequent handling. The disease is the most common cause of loss in Apples during the early stages of storage, and the so-called "Black Rot" of stored Apples is caused by the same fungus. As mechanical injury renders the fruit so liable to infection, it is obvious that, especially in years of epidemic infestations, care must be taken not to cause unnecessary injury when the fruit is picked, and afterwards when it is graded and packed or stored.

One Form of Injury

may occur at the time of picking, by removing the fruit from its stalk instead of picking it with the stalk attached. That injury of this kind may soon lead to loss in the crop is shown by observations made at East Malling in the autumn of 1926.

Early in September, as the Apples were being picked and graded for packing and marketing, it was noticed that fruit, apparently quite sound when received from the pickers, showed very pronounced Brown Rot within two or three days. On investigation it was found that in nearly every instance the rot had started at the stalk end, and, this condition only appeared on those Apples which had been pulled away from the stalk when picked. Observations were made on a batch of Apples which had been picked three days previously, and already a number of those without stalks showed the typical Brown Rot, the discoloration in some cases extending for half an inch or more from the stalk end wound.

The variety in which this type of injury was observed was "James Grieve," which is not only very susceptible to Brown Rot infection of the fruit, but, being a soft-wooded variety, the rot often extends from the fruit into the spurs, and also into the branches to form cankers.

To Obtain Some Idea

of the rate at which rot progresses in fruit infected in this way, Apples showing rot starting at the stalk end were selected. The margin of the brown area in each case was then marked with ink. The Apples were placed on a bench in an unheated laboratory, the temperature of which was approximately that of the packing shed.

On the following day, it was found that the rot had extended 7 to 16 mm. (on the average about ¼in.) beyond the marked line within the 24 hours. During the next 24 hours, the rot proceeded at about the same rate, so that nearly half the surface of each Apple was brown, and a few yellowish spore-bearing tufts, the fructifications typical of the fungus, were appearing at this stage. A few days later the Apples were completely brown, and numerous fructifications were present. It is obvious that the Apples had become infected soon after they were picked, and that the fungus had entered through the wound caused by removing the fruit from the stalk.

Grade Out Damaged Fruit.

It is apparent, also, that had these Apples been sent to market, when they already showed evidence of infection, they would have been unsaleable soon after their arrival. However carefully Apples are picked, a certain number will be pulled away with damaged "strigs." During grading, these should be set aside with the bruised fruit for immediate use. Such fruit should not be stored. Slight injuries in themselves are not necessarily very harmful, but, since they serve as ports of entry for certain parasites, such as the one under consideration, care in picking, grading and packing is essential for successful storing and marketing of fruit.

Since it is impossible to eliminate mechanical injuries altogether, especially when large quantities of fruit have to be handled, the grower should endeavour to reduce the chances of infection to a minimum by removing, as far as possible, all sources of infection. In certain seasons, it is not uncommon, at the time of picking, to see the ground under Apple and Pear trees strewn with fruit infected with Brown Rot, and bearing myriads of spores, which blow about and cause further infection. The collecting of such fruit and rendering them innocuous by burning or burying is possible in a garden or small plantation, but is hardly a practical proposition on large fruit farms.

The grower, however, should realize that rotting fruits, whether on the tree or on the ground, are a source of danger, and when it is at all practicable they should be destroyed. He is reminded, too, that Apples infected with Brown Rot frequently remain on the tree through the winter. These "mummies" if left on the trees, produce, in the following spring, another crop of spores which serve to start infection in the young fruit. It is therefore sound practice to remove, during the winter, any withered Apples that may be found on the trees.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

RETAILING FRUIT BY NUMBER.

Progressive Action in W. Aust.

At a recent meeting of a section of the Western Australian fruit trade, it was decided to give a trial to the retailing of suitable fruits by number instead of per pound. The new method will operate in regard to Apples, Pears, Peaches, Apricots, and Plums, and will be used as from 1st March.

Satisfaction is expressed at this decision. The fruit retailers and packers, however, point out that the system could be more successfully adopted if a Topping and Grading Act were in force, and have asked the Director of Agriculture to bring their views before the Minister.

Grading Apples for Export

The Minister of Markets has received a cablegram from the Official Secretary in Great Britain that in view of the heavy Apple supplies being shipped this year,

SPECIAL ATTENTION

should be devoted to the

GRADING

otherwise prices may be adversely affected. The elimination of the

UNDERSIZED SPECIMENS

is specially urged, as well as the necessity for avoiding the shipment in bulk of small-sized fruit.

The "LIGHTNING" MODEL 15C GRADER

has been specially designed for Apple-growers who require a machine at a

VERY LOW PRICE

that will enable them to prepare their packs in the manner required for export as well as to obtain the best price on the local market.

This model is equipped with spacious packing bins on both sides, and with an eight grade rubber roller which is adjustable for all classes and variety of fruit. The roller can be set to give any variation of sizes, but the following will be mostly used for Apples for export:—

1. Under 2¼.	3. Large 2¼.	5. Large 2½.	7. Large 2¾
2. Small 2¼.	4. Small 2½.	6. Small 2¾.	8. 3in. and over.

This model can be supplied promptly on very attractive terms of payment, and the price is LOW.

Full particulars—prices and terms on request.

LIGHTNING FRUIT GRADER CO. 5 HODDLE STREET, COLLINGWOOD N 9 MELBOURNE, VIC.

Cable and Telegraphic Address "Lightning" Melbourne

"To choose the best is Wisdom"

APPLE EXPORT

In other countries there is a shortage in the Apple crop, therefore this is

YOUR GOLDEN OPPORTUNITY

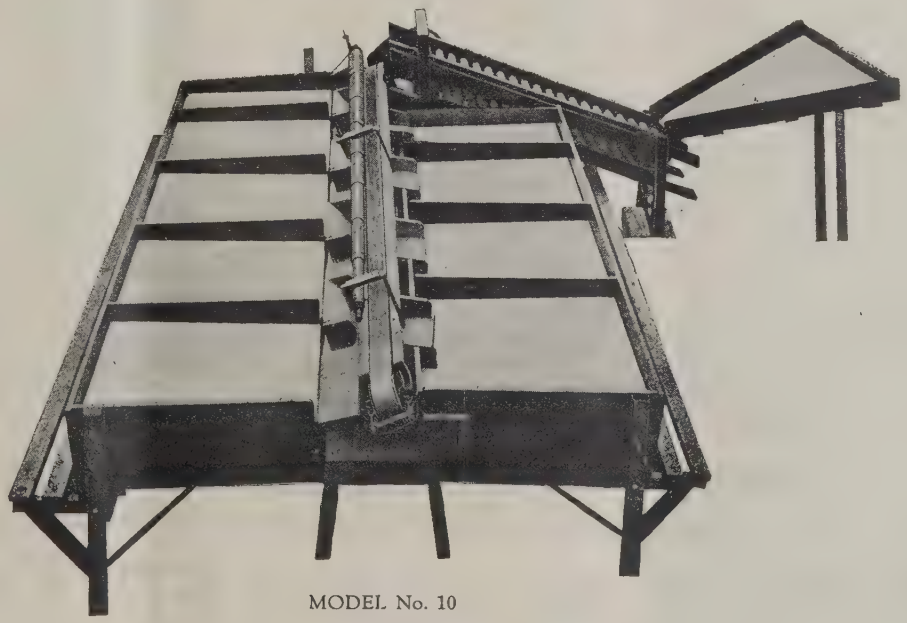
DO NOT LET IT PASS and thus miss the chance of solidifying Australia's good name as one of the foremost exporters in the world.

Send only YOUR BEST—

Perfectly Graded Perfectly Sized Perfectly Packed

We are here to help you, and have made special arrangements to give you the particular model Fruit Grader you require.

Write at once for further particulars.



MODEL No. 10

Model No. 10, with Elevator Conveyor attached.
Spring floor bins on each side of the machine.
Each bin will hold up to three bushel cases of fruit.

We also supply **Gravity Conveyors, Nailing down Presses, Packing Stools** and the latest and most successful **Paper Holders etc.**

LIGHTNING FRUIT GRADER CO. 5 HODDLE STREET, COLLINGWOOD, N 9, MELBOURNE, VIC.

Cable and Telegraphic Address: "Lightning," Melbourne

Tasmania

The Export Season :: Seasonable News and Notes

(By Our Correspondent)

THE APPLE EXPORT SEASON has commenced, and the first shipments have been forwarded to overseas markets. The crops this season are generally about ten days earlier than a normal year, and a fair proportion of the early varieties were ready for export at the end of February.

At present the Hobart wharves present a busy scene. River vessels of all descriptions have been pressed into service to move the big crop, and for the next ten weeks overseas vessels will be regularly arriving to lift cargoes.

The rains of January and February were most opportune, especially to the Derwent Valley, Bagdad, and S.E. districts, and the Apple crops on the whole are generally up to size and of excellent quality.

It is possible that the early estimates (3,750,000 bushels) may be exceeded. This will be largely governed by the amount of waste that is experienced, but the present indications show that this will be much less than expected.

The planing machines that have been installed in the different centres are producing

A very attractive case,

which at once commands attention, the smooth surfaces also facilitate branding, and allow this to be performed in a more efficient manner, the lettering being clearer and neater than on the undressed cases.

Apple and Pear Standards.

The board which is appointed to annually review the standards for interstate export met prior to the commencement of the season. At the Fruitgrowers' conferences held in August, certain amendments were suggested to the regulations, viz.:—

To prevent the export of blemished Apples and Pears (2in. size) in the "Plain grade."

To allow 2in. Pears clean and free from disease to be exported in the "Standard grade."

To permit the export of Apples and Pears packed and branded to the eighth of an inch sizes (2⅛in., 2⅜in., 2⅝in., etc.).

These were forwarded to the Department of Markets, but except for an intimation that the eighth of an inch sizes could be exported, no reply was received re the other suggestions. Under the circumstances, the board did not recommend any alteration to the existing regulations until the Commonwealth authorities effected the desired amendments to the overseas grades.

A notification has since appeared in the press that the amendments will be adopted, but will not come into force until the 1929 season.

Direct Shipments from the Huon.

Now that the Port Huon wharf extension is nearing completion and will accommodate overseas steamers, a move is being made to obtain similar facilities for the Cygnet district. A site has been chosen near Lymington, which will give ample depth of water at all tides.

It is understood that fruit will be loaded at Port Huon this season direct to the U.K., and if the steamers can be induced to pay regular visits to the Huon, as they do to Beauty Point, in the North, it is probable that the bulk of the crops in the future will not have the extra expense of transport to Hobart. Several handlings, which must result in a certain amount of bruising, will also be eliminated.

Hail Insurance on Fruit Crops.

This matter is being investigated by the Development and Migration Commission, and a questionaire circulated obtaining information as to the incidence and occurrence of hail injury throughout the State.

Now that a move has been made in the direction of inaugurating a co-operative scheme of insurance, some of the companies have become interested, and two or three are offering to cover crops during the risk periods.

The season, so far, has been singularly free from hailstorms, and no reports have been received that serious damage has been experienced from any of the districts.

Interstate Fruit Markets.

Last season early varieties of Apples were realising from 14/- to 16/- per case on the Sydney market. To-day there is practically no demand, and the Associated Agents are recommending growers not to ship, as the market is glutted with Apples and stone fruits. Under the circumstances, the bookings for "overseas" are very heavy, and a large amount of "interstate fruit" will be concentrated into the late boats.

Owing to the limited period of overseas export, it is doubtful if more than two million cases can be despatched on the time available—this leaves approximately one and three-quarter millions for the mainland. Cool stor-

DENNIS & COOPER LTD.

COVENT GARDEN, LONDON, ENGLAND

Fruit Brokers and Commission Salesmen

FINANCIAL FACILITIES OFFERED

Make your Shipments of APPLES through

BENDER & CO. PTY. LTD.

Hobart Office: 4 Davey Street. 100 Elizabeth Street, LAUNCESTON

WHO WILL SUPPLY ALL INFORMATION

age will certainly assist in regulating the supplies going forward, but it is evident prices will be very easy until the early mainland varieties are off the market.

Patent Fruit Case.

A company has been formed to manufacture a new fruit case. This is designed to ensure both lateral and vertical ventilation without the necessity of "dunnage."

Arrangements have been made for an experimental consignment to be forwarded this season, in order to demonstrate the advantages of this type of container over the ordinary case stowed with battens intervening for ventilation and air circulation.

Conference of Inspectors.

At a recent meeting of the Fruit Advisory Board an invitation was extended to the State and Commonwealth inspectors to meet members for the purpose of discussing the general methods of inspection that will be employed during the coming season.

Fruit Shipments
United Kingdom and the Continent

W. D. PEACOCK & CO.

24 Southwark St, London Bridge, LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

This meeting was most opportune, as a number of misunderstandings were cleared up, and the fruitgrowers' representatives made cognisant of the requirements for export with the assurance of a uniform interpretation of the regulations.

Obituary.

Two well-known fruitgrowers have "passed over" recently in the persons of Mr. J. P. Lawler, of Cygnet, and Mr. David West, of Huonville.

Mr. Lawler was one of the pioneer orchardists of the Huon district, and has always been prominent in any matters relating to the industry.

Mr. David West was engaged in the culture of berry fruits, besides Apples and Pears. As a director of the Port Huon Fruitgrowers' Association, he will be remembered for the enthusiasm and work which he devoted to the co-operative movement in Southern Tasmania.

INTERSTATE FRUIT TRADE.

Grading Regulations Not Being Observed.

Victoria Stated to be at Fault.

The fruit grading regulations in all the States, which were framed in accordance with a resolution passed at an interstate conference of Ministers of Agriculture, require certain markings to be placed on cases before the importation of fruit into each State from any other State will be permitted.

The requirements in New South Wales provide for the following branding:—

(a) The name and address of the person, firm or corporation by whom or by which the fruit was packed.
(b) The name of the variety.
(c) The name of the grade when "Special," "Standard," "Plain," or "D" grade, or when "Factory" grade, the words "For Factory use only."

And if the fruit is packed or contained in a case:

(d) The number or size of fruit contained in the case to be legibly marked on the end of the case in letters of not less than ⅜in. in height. If the particulars are printed on a label pasted on the end of the covering or package, they may be in letters not less than ¼in. in height.

The Victorian Superintendent of Horticulture has received a communication from the Chief Inspector of Fruit in New South Wales to the effect that these requirements are not being observed by growers in Victoria. Their attention is therefore drawn to the necessity for carrying out the requirements, otherwise it is possible that the New South Wales Department may insist on re-packing the consignment before sale in that State is permitted.

COLD STORAGE IN ENGLAND.

Success with Apples From New Zealand.

A consignment of 6,000 cases of Apples, mostly Sturmer, Statesman, and Rome Beauty from New Zealand, was received at Southampton, England, on June 8 last, and placed in cold storage. At the end of July the 5,500 cases were taken out of cold store and sold at good prices. The balance of the consignment, when inspected in August, was in excellent condition

IMPROVED SPRAYING OIL.

Doncaster, February 20th, 1928.

The Editor, "The Fruit World."

Dear Sir,—It has occurred to me that your readers would be interested to hear about some experimental work I have done in co-operation with the officers of the Vacuum Oil Company Pty. Ltd., for the control of codlin moth on Pears.

The tests were conducted as follows:—

A row of W.B.C. Pears, adjacent to a packing shed, where second-hand cases have been stored. These trees were, apparently, more susceptible to the attack of the codlin moth. The materials used were arsenate of lead at a standard strength, and 1-in-80 of a special spraying oil supplied by the Vacuum Oil Company—the first application being made when the calyx was just about to close. The whole row was sprayed.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.

Manufacturers IXL Jam and Canned Fruits.

Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.

All Orchard Supplies available at all times.

Agents for—

Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.

H. JONES & CO. LTD.,
HOBART

The second application, the first two trees of the row were missed. The third application, the third and fourth trees were missed—that is, trees 1 and 2 only received one spraying for the season; trees 3 and 4 only two applications for the season, the balance being sprayed four times. The Pears were picked on the 10th February.

The percentage of infested fruit on trees 1 and 2 respectively is between 1 per cent. and 2 per cent., all having late stings—that is, the grub just about to enter. Trees 3 and 4, less than 1 per cent., the balance being absolutely clean.

The foliage of these trees is in a particularly healthy condition. No red spider at all.

Yours truly,
WILLIAM A. WEBB.

"What America can teach us!"

The Fruit Industries of U.S.A. as seen by Mr. W. Ranger

A Critical Review.

"WHAT AMERICA can teach us!" is the title of a book published as the official report of Mr. W. Ranger, general manager of the Committee of Direction of Fruit Marketing, Brisbane, on his investigations into American fruit methods during his visit to the U.S.A. in 1927.

The book has six main divisions, with comments and recommendations, as follows:—(1) The Banana industry; (2) Citrus; (3) Pineapples; (4) deciduous fruits; (5) other fruits; and (6) general items with comments on the report as a whole. A summary is as follows:—

T. J. POUPART
Ltd.
Covent Garden, London, W.C.2
and 3 Love Lane, Eastcheap, E.C.2
The Premier Firm of Fruit Salesmen in Great Britain
Sale by Private Treaty only
(GIVES BEST RESULTS)
Commission the exclusive basis (purchase propositions cannot be considered)
Advances offered to cover freight and accessory charges
Victorian Representative :
FRED. J. ANDREW
416 Little Collins Street, Melbourne

Bananas.—The exports in bunches of the principal Banana-producing countries for 1926 were approximately:—Jamaica, 18,250,000; Honduras, 14,500,000 Columbia, 10,870,000; followed by Costa Rica, Canary Islands, Guatemala, Mexico, Panama, Cuba, Nicaragua—in all about 77½ million bunches.

The principal markets are the U.S. and Canada, whose annual consumption is about 53,500,000 bunches. Great Britain and Continental Europe import about 25,000,000 bunches annually.

The countries visited were Guatemala and Honduras. The only commercial variety grown is the Gros Michel. About 150 stems to the acre is considered a fair average.

The report gives information on planting, selection of stock, pruning, transport and handling, railway cars, temperatures; ripening and distribution (including advertising) are dealt with exhaustively.

The report urges the establishment of experiment stations; . . . "as a result of this report it is hoped that transport and ripening difficulties will be overcome. Production problems need similar solution. . . ." The American consumption of Bananas is given as 25lb. per head per annum, and as the Australian consumption is 10lb. per head per annum, it should be possible to double the consumption here.

For long-distance transport it is necessary to carry our Bananas at 60 to 70 deg. F. The present type of railway waggons is entirely unsuitable, and insulated waggons will be essential eventually. By their use, chilling of the fruit in Winter and overheating in Summer will be prevented. Losses through "boiled" fruit amount to about 10 per cent. of the total consignments during Summer. In Winter, losses through "squirter" have been appalling, and **there is every probability that faulty conditions of transport are largely, if not entirely, responsible.**

"Now that we know the conditions necessary, we must obtain them, and if the railways cannot, or will not, provide them, **we must turn to the boats.**"

Recommendations then follow to guide the grower and packer in the meantime, also sketches of the improvements desired in railway waggons.

Responsibility of the Railways.

The report states:—"(1) Legal Responsibility.—In U.S.A. the railways are held responsible for damage resulting from improper transport. In Australia the railways take no responsibility whatever, and this undoubtedly is the cause of much of our present trouble. Had the railways had any responsibility they would have investigated the matter for themselves and provided a remedy. As it is, we have had to conduct the investigations. . ."

The moral and the business responsibilities are also dealt with. The C.O.D. pays in railway freights in Australia about £160,000 per annum.

Credit is claimed in Queensland for "the establishment of an organisation that permits of the full control of the industry should occasion warrant it": the establishment of grade standards and grants for research work.

The case against Queensland Banana industry is that of the failure to supply a reliable article and the insufficiency of supplies, resulting in unduly high prices.

Should the industry fail to produce a satisfactory article, it should not be entitled to the protection now afforded.

American Citrus Industry.

The total production in 1926 was:—**Oranges,** 34,312,000 boxes (51,468,000 Australian boxes), of which California produced 24,000,000, or 70 per cent., and Florida 9,000,000, or 26 per cent.

Grapefruit. — 7,916,000 boxes (11,874,000 Australian boxes), of which Florida produced 6,900,000 boxes, or 88 per cent., and California 600,000, or 8 per cent.

Lemons. — 7,200,000 boxes (10,800,000 Australian boxes), all produced in California. (This represents about 85 per cent. of the consumption, the balance being imported from Italy, in spite of a Californian overproduction.)

Exports were:—Oranges, 2,253,532 boxes, of which Canada took 2,007,102 and the United Kingdom 113,857.

In California there are about 250,000 acres of citrus, and it is doubtful if another 50,000 acres of really suitable land with water are available. In Florida, on the other hand, large areas have recently been planted, and a crop of thirty to forty million boxes is expected in the comparatively near future.

The report deals with propagation, root stocks, bud selection, planting, irrigation, frost protection, fertilisation, yields and cost of production, pest control, marketing, and especially the operations of the California Fruitgrowers' Exchange ("Sunkist"). Packing house operations are described in detail and illustrated, the Brogdex process, ripening by ethylene.

The Lemon situation is also presented in detail.

In his comments and recommendations, Mr. Ranger states that it is possible for us to improve our Citrus in-

dustry greatly by merely copying what California has already done.

Packing houses are advocated, the testing out of the Brogdex process, further research work on stocks and bud selection.

Pineapples.—The Pineapple industry in Hawaii has made wonderful progress. From a small beginning in 1903, the output has risen to 9,000,000 cases, averaging 22 cans to the case.

Various cultural and manufacturing phases are referred to. Comparing Queensland and Hawaiian prices, the report states:—"At Hawaiian prices our crop would be worth an average price of 2/6 per case, tops off, as against our actual average of nearly 7/3 per case, tops off. Whilst the outside grower cannot grow Pineapples at a profit at present prices, the farms owned by the canning companies can show satisfactory profits. Steam ploughs and powerful tractors are used on these farms, enabling large areas to be cultivated with a minimum of overhead expense.

The report recommends a study of the injury from nematodes, mentions mass production in production in field and factory, and states that without the Queensland Fruit Marketing Act it would be almost impossible to secure permanent stability in the Queensland Pineapple industry.

The Apple Industry.

The total production of Apples in the U.S.A. is about 200,000,000 bushels; in 1926 it was 246,000,000 bushels. Figures are given showing the production per year from 1919 to 1926, also the declining returns per acre. In 1919 the returns were £52.184 per acre, and in 1926 £15, or an eight-year average of £31/5/9 per acre.

The districts visited were the Pajaro Valley and the Sebastopol districts of California.

Packing and marketing methods are described. The report continues:—"The lack of organisation in the California Apple section was in striking contrast to some of the other sections of the fruit industry.

"All the Californian trees are on seedling stock, and in vigour and production are far ahead of Queensland orchards. The Codlin Moth parasite, Trichogramma minutum, is worth testing in Australia. At a retail price of 20/10 per case, the retailer received 7/9½, jobber 2/0½, wholesaler 1/7½, shipping organisation 1/1½, transportation 3/4, grower's portion 4/11 per box; deducting 1/8 for boxes, paper, nails, labour, and overhead, the return was 3/2 per bushel.

Other sections of the report deal with Pears, Plums, Peaches, Prunes, Grapes, canning fruits, Tomatoes, Strawberries, Avocados, Lettuce, Persimmons, Asparagus, Potatoes, and other vegetables.

In the summary improved transport is advocated.

Under the heading, "Organisation," it is stated that the best type of co-operative organisation is that of the California Fruitgrowers' Exchange, by means of the local packing houses, district exchanges, and a central exchange.

". . . . A feature of the American type of organisation is that the system is voluntary, and the grower is at liberty to join the organisation or refrain from doing so. The measure of control exercised over the particular crop therefore depends upon the membership of the particular organisation. The Queensland type of organisation makes possible 100 per cent. control of the crop on a compulsory basis."

COVENT GARDEN, LONDON
Ridley, Houlding
& CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.,
Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

The voluntary and compulsory types are compared, and in applying what is termed the "acid test," the report continues:—"Can the voluntary system, as amplified in the American organisations stand the test? The answer is found that **practically no section of the fruit industry in U.S.A. proper, with the exception of Oranges, is obtaining the cost of production.** The merit of the compulsory type is said to be in the collective bargaining power of the industry as a whole. . . ." The industry possesses an effective monopoly, which, if used wisely, is a benefit not only to the grower, but to all concerned.

In support of the Queensland compulsory system, the report states that compulsion gives effective control of surplus supplies, and states: " . . . An example of this form of control is to be found in the Queensland sugar industry. This year the total production is 493,000 tons; the Australian consumption is 342,000 tons, which will be sold at £26 per ton. The surplus of 151,000 tons will be sold overseas at £11/10/- per ton, thus making an average price of £21/11/2 per ton."

Mr. Ranger concludes:—

"I am fully convinced that, although America is far ahead of us in the technique of handling fruit, our (Queensland) type of co-operative organisation is greatly ahead of any of their types of co-operative organisations."

Mr. RANGER'S REPORT REVIEWED.

A Critical Survey.

Erroneous Conclusions.

Mr. Ranger is to be complimented on the style of his report: it is clear, explicit, and contains a fund of information, particularly in relation to Pineapples, Bananas, and citrus fruits.

With some other sections of the U.S. fruit industry, however, Mr. Ranger is not on sure ground. An examination of the report reveals both inaccuracies and generalities, and there will be many who disagree—

(a) With the statement that only the citrus section of the fruit industry is paying expenses, and

(b) That the compulsory system of organisation is desirable.

It is presumed that the reader is familiar with the compulsory system operating in Queensland, as no record of that system is included.

It is a rather striking commentary, however, that the Banana-growers and merchants recently fought the Committee of Direction in the High Court, and secured the verdict, with costs against the C.O.D., winning the freedom to trade which the C.O.D. denied the growers. This action cost the C.O.D. over £3,000.

At a deputation to the Minister of Agriculture it was stated by growers that the compulsory system of organisation in Queensland, under Act of Parliament, was responsible for more bitterness and dissention than any other piece of legislation.

There are many who state that the C.O.D. has not justified its existence, that the present expensive staff is unnecessary, and that the railway and other rebates which constitute the present reserve fund should have been handed over to the growers long ago.

Illogical.

Mr. Ranger is illogical. He commends an "effective monopoly" for fruit control, but condemns an "effective monopoly" for railway control. The privately owned and competing

American railways "are held responsible for damage." The Government monopoly in railways in Australia "take no responsibility whatever," and this, in Mr. Ranger's own words, "is the cause of much of our present trouble."

The Banana industry in Honduras appears to have been enquired thoroughly into by Mr. Ranger, and certain valuable recommendations are made, particularly regarding scientific research and railway transportation. Our Queensland correspondent points out, however, that the value of the report is somewhat discounted because it deals almost exclusively with the Gros Michel variety, which is not grown commercially in Queensland.

The Pineapple industry of Hawaii has also received attention. The fact that Hawaii can produce Pineapples cheaply—and profitably—may cause many to think hard. The report states "At Hawaiian prices our crop would be worth an average price of 2/6 per case, tops off, as against our actual average of 7/3 per case, tops off."

It does not appear over creditable that the Australian costs of production should be 300 per cent. higher than those of Hawaii.

Neither Bananas nor Pineapples, however, are grown commercially on the mainland in U.S.A.

The report of the citrus industry is interesting. The packing and marketing operations of the California ("Sunkist") Fruit Growers' Exchange are skilfully described. Mr. Ranger believes Australia would be benefited by "merely copying what California has already done." This opinion is worth consideration in view of the fact that citrus associations in Australia have departed widely from the Californian system of marketing. In America the fruit is sold to wholesale buyers, or sold by auction to whoever will buy. In Australia the fruit is sold only on commission, and sales are limited to certain channels, and these, in the opinion of many growers, are too restricted.

There are several notable omissions. No reference is made to the operations of the Mutual Orange Distributors, the American Fruitgrowers Inc., nor to the California Fruit Exchange —the "Sunkist's" sister organisation. This Exchange, which is organised on similar lines to deal with deciduous fruits, pays a considerable sum to the "Sunkist" citrus organisation for utilising the service of their staff and offices.

The Apple Industry.

In a report which purports to deal with investigations in the American fruit industry, the Apple section is confined to 10 pages in a total report of 162 pages, yet Apple-growing is the biggest section of all. The total Apple production, according to Mr. Ranger's own report, is around 200,000,000 bushels annually. Citrus production is given at 74,142,000 bushels.

Mr. Ranger will have great difficulty in convincing folk that the American Apple industry is in the parlous condition which he suggests: that the co-operative associations are inefficient, and that the only hope is for a control board by legislative enactment.

No report on the U.S. Apple industry is complete without individual reference to Oregon, Washington, or to the Eastern States. Mr. Ranger visited only two Apple-growing districts in California—in which State Apple-growing is not a major enterprise.

A comparison would be that of an American coming to Queensland to study Bananas and Pineapples, and, after seeing Stanthorpe, to report on the Apple industry of the Commonwealth.

The report deals with the "total" production of Apples in U.S.A.—246,000,000 bushels in 1926, and so on. This, however, includes the culls, the pie fruit, cider and vinegar Apples. No mention is made of the "commercial" crop, which in 1926 was 118,000,000 bushels. Yet it is the commercial crop which is of major importance; it is the fruit which is sold in the markets. A list of figures is given by Mr. Ranger, showing the declining returns per acre from £52/18/4 per acre in 1919 to £15 per acre in 1926, or an eight-year average of £31/5/ per acre. It is not stated whether this is for the "total" crop or the "commercial" crop.

The large and successful co-operative organisations of Apple-growers in Oregon and Washington will not readily agree with the statement made by Mr. Ranger recently in Melbourne that "Apple-growers in U.S.A. are a disorganised body."

As to costs of production, a report to hand from Wenatchee, Wash., U.S.A., dated January, 1928, shows that in 1925, on a 92-acre orchard, the production was 54,512 boxes. The "fixed" costs of production are given at just over £58 per acre, or a total of £5,354, and the total costs of growing and harvesting amount to £10,995 (4/- per box), and the net returns were 5/- box, giving a net profit of £2,616, or £28 per acre.

The fixed "growing" costs referred to include:—Growing, telephone and postage, travelling, insurance, taxes, fuel, oil and petrol, insecticide, team and stable, maintenance of equipment and realty, current, light and power, irrigation dues, pruning labour, spraying labour, cultivating, irrigating, clearing, superintending foreman and irrigator, depreciation and overhead.

The balance is made up of manuring, thinning, harvest labour, case-packing, etc.

The foregoing is only one typical example of several, the object of the writer being to emphasise the necessity of securing a maximum yield per acre. With a not infrequent yield of 1,000 bushels per acre, the growers are making good money; the object is to raise the general average to the high yield of 1,000 bushels per acre in the Wenatchee Valley.

Describing another orchard, the U.S. report just referred to continues: "Considering the orchard at £300 per acre value, the 1,000 box yield shows a profit for 1927 of 70 per cent. on the investment, while a 300-box yield would show a profit for 1927 of 4 per cent. Growers should aim at increased yields per tree and per acre."

The excellent prices received by growers in the 1924 season were so freely quoted in the press that the California Fruit Exchange found it necessary to publish a statement

ORCHARDISTS!
TO OBTAIN THE BEST RESULTS
Use the Right Spray
at the Right Time
"YARRA" BRAND SPRAYS
are the cheapest, most effective and — economical on the market —
We manufacture a complete range — of Sprays for the Orchardist —
including Arsenate of Lead (paste and powder), Lime Sulphur, Red Spraying Oil, Copper Soda Mixture, Benzole Emulsion, Spray Spreader etc., etc., etc.
Prices and particulars on application to
PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street
155 Yarra Street
Abbotsford, Vic.

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

showing seasonal changes and urging that there be no increase of plantings. Numerous instances could be quoted revealing an entirely different aspect from that quoted by Mr. Ranger.

Seedling Stocks?

Mr. Ranger's advocacy of seedling stocks for Queensland opens the way for a discussion on this much-debated question, and there are not lacking men with a life-long experience in fruit trees who seriously warn Queensland of the dangers of woolly aphis on stocks which are not proof against woolly aphis on the roots.

On this stock question, Mr. Ranger is far astray when he states, "the Northern Spy and the Delicious appear to be the two best stocks so far used." The Delicious is not used as a stock for Apple trees at all.

"Compulsory" Co-operation.

In heavy type Mr. Ranger states that **he is fully convinced that the Queensland (compulsory) type of co operative organisation is greatly ahead of any of the American types of co-operative organisations.**

He is entitled to his opinion, of course, but it would appear that there are many in Queensland who, while necessarily under the compulsion of the Committee of Direction, are not yet of the "compulsory" faith. The fact is there is no such thing as "compulsory" co-operation any more than there is "compulsory" goodwill or "compulsory" love. The Federal Court of "compulsory" Conciliation and Arbitration is sadly in disrepute.

America certainly does not agree with Mr. Ranger's conclusions. The model of successful co-operative effort is the California Fruit Growers' Exchange, and this may be accepted as a "type," as successful other organisations have followed along the same lines.

California, with a quarter of a century of successful operation along these lines; Oregon and Washington, with similar successful organisations in handling Apples do not accept Mr. Ranger's hasty summary.

The matter of compulsion was discussed while in America, and we found 100 per cent. opposition to it for three reasons—

(1) Compulsion would be illegal.

(2) It would be undesirable even if legal, for compulsion would destroy the healthful spirit of co-operation.

(3) Compulsion would bring "politics" into the picture—the bare idea of which is hateful to the American.

Summed up, it would appear that whereas Mr. Ranger has many investigations into varied details and has presented an interesting report, he has endeavoured to encompass too much, and he has drawn erroneous conclusions because of his incomplete information.

The socialised sugar industry may be Mr. Ranger's ideal type of organisation, but the fruitgrower, who, with other taxpayers, has to bolster up this "industry"—incidentally to swell the profits of an "effective monopoly"—may be forgiven for not sharing Mr. Ranger's enthusiasm.

The report is good in parts, and bad in parts. The aim appears to be to "boost" compulsory organisation, and in this respect it is singularly unconvincing.

New Spraying Oil.—Attention is directed to a new patent oil spray. This is white oil emulsion under the trade mark "Volck," being manufactured by the Californian Spray Chemical Co. at Watsonville, California, U.S.A. Several new features for effective pest control are claimed for the "Volck" white oil emulsion, particulars of which are included in their advertisement on page xvi. Now is the time for spraying to control Red Scale, also for Black and Brown Scale in the months of March and April. Literature regarding "Volck" is obtainable from H. C. Pannifex & Co., 26 Market-street, Melbourne, C.1, and the Australian Fruit & Produce Co., Fruit Exchange, Sydney, N.S.W.

N.S.W. Notes

(See also p. 106.)

Blackheath.—There are heavy crops of Apples in this district, but unfortunately a fair proportion suffered through a hail storm. The Blackheath branch of the Fruitgrowers' Federation of N.S.W. is making good progress. Mr. William White is the president, and Mr. E. R. Jackson secretary.

Coomealla. — Development work, particularly additional clearing, planting and trellising, has been carried out on the Coomealla irrigation area during the half-year ended 31st December, and the number of holdings now occupied is 95.

The second and third irrigations of the season have been carried out, more than 1,000 acres being irrigated on each occasion.

A number of holdings containing about 15 acres are still available for selection. A Progress Association of settlers has been formed for the advancement of the area.

The bridge over the Murray at Mildura, which was opened in October last, has resulted in a considerable increase of traffic through Coomealla.

GENUINE
"Black Leaf 40"
IN
10lb. & 2lb. tins
DISTRIBUTORS
The PRODUCERS' DISTRIBUTING Society Limited.
SYDNEY and MELBOURNE

Here at Last!
PATERSON'S CONCENTRATED
"CLENSEL"
British Product.
Insecticide and Fungus Destroyer
The only combination Spray in the World.
The Spray that has achieved Remarkable Results throughout England and India.
Write for Particulars of Results of Tests by Australian Fruitgrowers.
Once Tried Always Used.
Eradicates on contact Red Spider, Scale, Thrips, Curly Leaf, Green Fly, Black Rot, Mildew, etc.
Non-poisonous. Non-injurious to trees or foliage.
"CLENSEL" can be used any time of the year.
Easily mixed. No other spraying solutions to be added. Badly infected orchards can be effectively cleaned with two applications of CLENSEL.
Further particulars from—
BRUCE ANDERSON——CLENSEL (Aust.) AGENTS
56 Hardware Street, Melbourne

Queensland

Orchard Operations - News and Notes

(By Our Correspondent.)

OPERATIONS IN THE ORCHARD are still restricted on account of more or less continuous rainfall following upon a short spell of excessive heat.

Amongst **Bananas** little can be done beyond collecting and packing fruit and trusting to luck to have it carted through quagmire, courteously termed roads, to the railway.

There is every indication of an appreciable drop in Bananas prices during the next months when the position regarding average and first quality land will probably be more appreciated.

Voluminous notings on the subject of the transport of this fruit have been made available as a result of Mr. Ranger's recent tour—much useful information is contained of which advantage would no doubt be taken, but unfortunately the observations were applied to the Gros Michel variety, which is very different from the popular Cavendish produced in Southern Queensland. Also the transport is effected in the bunch form and not in cases as here. The case method has commendable features in regard of facilities for handling in transport, but otherwise its influence is decidedly harmful.

When reasonable extension is effected in the North—the present planting barely exceeds 1,000 acres—it is expected that better transport facilities will be provided by the shipping companies—a feature that was not worth considering when freights amounted to about £1,000 per boat and no other means of forwarding were available. The completion of the North-Coast railway has completely altered the aspect, much to the benefit of those affected.

Citrus trees look well throughout and a heavy crop is anticipated.

Insect pests and fungi are somewhat in evidence, but to a less extent than usual. Controversy has originated regarding the merits and demerits of Cyanogas, but the opponents to its use appear to be biased, probably on account of postponing what they consider the evil day of having to effectually rid their trees of scale insects. Where applied, the results have been satisfactory except against the pink wax scale which has a wide distribution, and does not confine its attention solely to cultivated trees. Various spraying formula are applied against it—the cheapest and most effective—washing soda solution—being the least used.

* * * *

Deciduous Fruits have been coming forward in increased quantity, and until quite recently has been particularly free from fruit fly, but this pest now appears to be making a special effort to retrieve its reputation, as a heavy percentage of infested fruit is being consigned to local markets.

Temperate-fruit growers have reason for complaint. They may be able to satisfactorily combat such of the pest as originates locally, but the possibility of coping with invasions from other districts does not exist.

* * * *

Conditions are still most favorable for

propagation by budding

either young stock or headed-back trees.

Grafting, except amongst Apples, is rarely resorted to in this State, where the adhesion of buds is rapid and followed by early growth.

* * * *

Standardisation of fruit is freely talked of, but the first move toward it reducing the number of varieties has escaped mention by organisations concerned, though it is reported that in making arrangements for supplies of budwood for local nurseries, a limitation of varieties has been applied by the Department of Agriculture. This could, with advantage, be applied to several other fruits.

Orchard Notes for March.

The Coastal Districts.

AS SOON as the weather is favourable, all orchards, plantations, and vineyards that have been allowed to get somewhat out of hand during the rainy season should be cleaned up, and the ground brought into a good state of tilth so as to enable it to retain the necessary moisture for the proper development of trees or plants. As the wet season is frequently followed by dry autumn weather, this attention is important.

Banana plantations must be kept free from weeds, and suckering must be rigorously carried out, as there is no greater cause of injury to a Banana plantation than neglect to cultivate. Good strong suckers will give good bunches of good fruit, whereas a lot of weedy, overcrowded suckers will only give small bunches of undersized fruit that is hard to dispose of, even at a low price.

The cooler weather will tend to improve the carrying qualities of the fruit, but care must still be taken to see that it is not allowed to become over-developed before it is packed, otherwise it may arrive at its destination in an over-ripe and consequently unsaleable condition. The greatest care should be taken in grading and packing fruit. Only one size of fruit of even quality must be packed. Smaller or inferior fruit must never be packed with good large fruit, but must always be packed separately as required by regulation.

The marketing of the main crop of **Pineapples**, both for canning and the fresh fruit trade, will be completed in the course of the month, and as soon as the fruit is disposed of, plantations which are apt to become somewhat dirty during the gathering of the crop must be cleaned up. All weeds must be destroyed, and if blady grass has got hold anywhere it must be eradicated, even though a number of Pineapple plants have to be sacrificed, for once a plantation becomes infested with this weed it takes possession and soon kills the crop. In addition to destroying all weed growth, the land

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.

New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

should be well worked and brought into a state of thorough tilth.

Marketing Citrus.—In the Central and Northern districts, early varieties of the main crop of citrus fruits will ripen towards the end of the month. They will not be fully coloured, but they can be marketed as soon as they have developed sufficient sugar to be palatable; they should not be gathered whilst still sour and green. Citrus fruits of all kinds require the most careful handling, as a bruised fruit is a spoilt fruit, and is very liable to speck or rot. The fungus that causes specking cannot injure any fruit unless the skin is first injured. Fruit with perfect skin will eventually shrivel, but will not speck. Specking or blue mould can therefore be guarded against by the exercise of great care in handling and packing.

At the same time, some fruit is always liable to become injured, either by mechanical means, such as thorn pricks, wind action, hail, punctures by sucking insects, fruit flies, the spotted Peach moth, or gnawing insects injuring the skin. Any one of these injuries makes it easy for the spores of the fungus to enter the fruit and germinate. All such fruit must therefore be gathered and destroyed, and so minimise the risk of infection.

When specked fruit is allowed to lie about in the orchard or to hang on the trees, or when it is left in the packing sheds, it is a constant source of danger, as millions of spores are produced by it. These spores are carried by the wind in every direction, and are ready to establish themselves whenever they come in contact with any fruit into which they can penetrate. Specking is accountable for a large percentage of loss frequently experienced in sending citrus fruits to the Southern States, especially early in the season, and as it can be largely prevented by the exercise of necessary care and attention, growers are urged not to neglect these important measures.

Grading.—Fruit must be carefully graded for size and colour, and only one size of fruit of one quality should be packed in one case. The flat bushel-case (long packer) commonly used for citrus fruits, does not lend itself to up-to-date methods of grading and packing.

We have yet to find a better case than the American Orange case recommended by the writer when he came to this country from California in 1892, and which has again proved its superiority in the recent shipments of Oranges from the Southern States to England.

Failing this case, a bushel-case suggested by the New South Wales Department of Agriculture is, in the writer's opinion, the most suitable for citrus fruits, and were it adopted it would be a simple matter to standardise the grades of our citrus fruit, as has been done in respect to Apples packed in the standard bushel-case used generally for Apples throughout the Commonwealth.

The inside measurements of the case suggested are 18in. long, 11⅝in. wide, and 10½in. deep. This case has a capacity of 2,200 cubic inches, but is not included in the schedule of the regulations under "The Fruit Cases Acts, 1912-1922." The half-bushel case, No. 6 of the schedule above referred to, is 10in. by 11⅝in. by 5¼in. inside measurements, with a capacity of 1,100 cubic inches. The case should be suitable for Oranges and the half-case for Mandarins.

No matter which case is used, the fruit must be sweated for seven days before it is sent to the Southern markets, in order to determine what fruit has been attacked by fruit fly, and also to enable bruised or injured fruit liable to speck to be removed prior to despatch.

Fruit fly must be systematically fought in all orchards, for if this important work is neglected there is always a very great risk of this pest causing serious loss to citrus growers.

The Spotted Peach-moth frequently causes serious loss, especially in the case of navels. It can be treated in a similar manner to the codlin moth of pip fruit, by spraying with arsenate of lead, but an even better remedy is not to grow any corn or other crop that harbours this pest in or near the orchard. Large sucking-moths also damage the ripening fruit. They are easily attracted by very ripe bananas or by a water-melon cut in pieces, and can be caught or destroyed by a flare or torch when feeding on these trap fruits. If this method of destruction is followed up for a few nights, the moth will soon be thinned out.

Strawberry planting can be continued during the month, and the advice given in last month's notes still holds good. Remember that no crop gives a better return for extra care and attention in the preparation of the land and for generous manuring than the Strawberry.

The Granite Belt, Southern and Central Tablelands.

The advice given in these notes for the last few months regarding the handling, grading, and packing of fruit should still be carefully followed. The later varieties of Apples and other fruits are much better keepers than earlier ripening sorts, and as they can be sent to comparatively distant markets, the necessity for very careful grading and packing is, if anything, greater than it is in the case of fruit sent to nearby markets for immediate consumption.

The same care is necessary in the packing of grapes, and it is pleasing to note that some growers are packing their fruit very well. Those who are not so expert cannot do better than follow the methods of the most successful packers.

Parrots are frequently very troublesome in the orchards at this time of the year, especially if there is a shortage of their natural food. So far, there is no very satisfactory method of combating them, as they are very difficult to scare, and, though shooting reduces their numbers considerably, they are so numerous that it is only a subsidiary means.

As soon as the crop of fruit has been disposed of, the orchard should be cleaned up, and the land worked. If this is done, many of the fruit-fly pupæ that are in the soil will be exposed to destruction in large numbers by birds, or by ants and other insects. If the ground is not worked and is covered with weed growth, there is little chance of the pupæ being destroyed.

Where citrus trees show signs of requiring water, they should be given an irrigation during the month, but if the fruit is well developed and approaching the ripening state, it is not advisable to do more than keep the ground in a thorough state of tilth, unless the trees are suffering badly, as too much water is apt to produce a large, puffy fruit of poor quality and a bad shipper. A light irrigation is therefore all that is necessary in this case, especially if the orchard has been given the attention recommended in these notes from month to month.—"Queensland Agricultural Journal."

BRISBANE

R. B. BOLTON & Co.

ALBERT HOUSE,
BRISBANE.

Are Brokers and Selling Agents for

FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

also Freight Agents.

We Sell to Wholesale Distributors only, and act for Canners and Packers who desire a wide Distribution.

Plant Fruit Trees
Of Only Best
Market Value
Don't lay out money on anything but the best of Stock when buying fruit trees. Get supplies this year of
Goodman's
Fruit Trees
which produce properly developed fruit, fully flavoured and in great selling condition. Goodman's trees are true to name, and will grow well under all conditions. All varieties are in stock, full details of which are given in our
1928
Catalogue
Just Out!
Free To You--
Write Now
C. J. GOODMAN
PICNIC POINT NURSERIES
BAIRNSDALE
VICTORIA.

APPLE AND PEAR GRADING REGULATIONS.

Vigorous Criticism by N.S.W. Fruitgrowers' Federation.

Several Amendments Urged.

WITH THE LARGE CROP of Apples and Pears to be marketed this year, the Fruitgrowers' Federation of N.S.W. has again drawn attention to the necessity for certain amendments being made to the existing Apple and Pear grading regulations.

The amendments suggested herein apply to both the Commonwealth export regulations and the State regulations governing the domestic market, as both sets of regulations are identical in so far as they are affected by these proposals.

The matter is one of considerable importance this year, more particularly owing to the heavy crop. It is anticipated that Australia (including Tasmania) will export about two and one half million bushels this season; therefore the need for grading regulations that are easily interpreted is essential.

The Federation is firmly of the opinion that the existing regulations are to a degree unworkable, and therefore result in confusion, not only to growers, but to inspectors and buyers.

Briefly, the requirements of grading regulations should be:—

(a) That each grade contains fruit of one quality, allowing, of course, a slight margin for errors, which might be called "tolerance."
(b) That the regulations are of such a character that they lend themselves to quick and efficient shed grading of the entire crop.
(c) That an inspector can tell definitely and quickly whether a consignment is graded as marked.
(d) That an inspection at any port or market by inspectors who have never been in personal touch would yield uniform results.

The existing regulations do not comply with these essential features, the grades are not grades at all, but are "blends," as the second grade is to all purposes the same as the first grade, with the exception that a larger proportion of marked fruit is allowed, whereas strict grading should mean that the second grade would consist of fruit 100 per cent. of which is of an inferior quality to the grade above.

For instance, "Standard" grade, by allowing 10 per cent. of fruit with certain defined blemishes, means that the balance, namely, 90 per cent., must be unblemished, and therefore of such quality as to enable it to be packed in the "Special" grade.

Surely true grading should allow all unblemished fruit to go into the top grade, and not, as at present, for a lower grade to be carrying a portion of fruit which should be in the top grade.

It is therefore considered to be commercially impossible to pack in grades under these regulations, and it must be just as impossible to inspect and definitely pass or reject consignments, as it

merely leaves inspectors to interpret the regulations according to their own views, with a result that different inspectors act differently, and thus defeat the whole aim and object of grading regulations, which is **standardisation.**

The "Standard" grade should be amended by the elimination of the sub-paragraph which allows 10 per cent. (by number) of the fruit to be blemished. The effect of this would be that the "Standard" grade would allow 100 per cent. of its fruit being of a lesser quality than the "Special," which is surely what is intended by grading.

The desire of the Federation is to standardise the pack of Apples and Pears wherever marketed, thus giving the growers and distributors an opportunity that does not exist at present of stabilising prices and also of protecting buyers and securing their confidence.

The present grades, containing, as they must do, fruit of two qualities in the same grade, means that a seller must sort out fruit after it has been graded in accordance with the regulations, and he must ask one price for the blemished portion and a different price for the unblemished portion, instead of, as should be the case, being in a position to know that a bushel case of "Standard" grade contains 100 per cent. of fruit which is of the same quality.

The growers of New South Wales are vitally interested in questions affecting the marketing of Apples and Pears, as the production of this class of fruit in this State has now reached a substantial figure, and there is a considerable area of new plantings coming into bearing. In addition, also, the best market in the Southern Hemisphere is in Sydney, and this market in the past has absorbed from the southern States a large quantity of fruit below exportable standards, and in order to ensure that the marketing is placed on a sound basis it is absolutely imperative to commence with workable grading regulations.

FRUIT GRADING REGULATIONS.

VICTORIA believes present standards satisfactory, but that the two-inch "Plain" grade should not be exported.

Opinions among Victorian fruit exporters do not favor the alterations to the grading regulations, as suggested by N.S.W., but that the grading regulations as they stand at present are substantially correct and workable.

It is definitely proposed, however, that the export of 2in. Apples in the "Plain" grade should not be permitted.

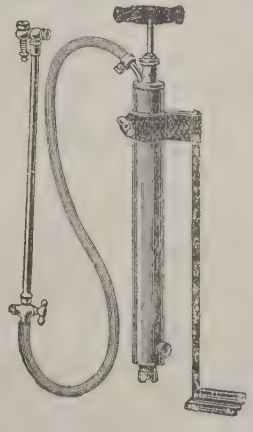
The "Special" grade is provided for extra quality fruit, practically "Showbench" fruit, with no blemishes. Growers who can put up this grade and satisfy the inspectors that the fruit is of this standard are entitled to do so and gain the market benefits thereby.

The bulk of the fruit is packed under the "standard" grade—which provides for first quality fruit, but allows a tolerance of 10 per cent. for human errors. It is not suggested that the standard grade is, or should be, a "blend"—by means of which 90 per cent. of choice fruit shall be used to "carry" 10 per cent. of an inferior sample.

In the busy rush of handling large quantities of fruit, it is easily possible for a small percentage of slightly marked fruit to be included—and under the standard grade this is permissable, in order that growers can pack wholesale quantities in bulk lots for shipment. The high quality of the fruit grown in N.S.W. and the excellent quality of the packs are freely admitted—and for this reason it is not difficult to understand the desire on the part of N.S.W. to set a standard packing both for the export and local trade, which is of a very high order.

The views expressed by the N.S.W. Fruitgrowers' Federation will surely be observed with interest, and the opinions of exporting growers in the other States, now that the subject has been opened for discussion, will be welcomed.

FOR
SPRAYING, LIMEWASHING and DISINFECTING
RELIABLE AND EFFICIENT MACHINES ARE ESSENTIAL
Before Placing Your Order ASK A FRIEND
WHO HAS USED A
VERMOREL "ECLAIR" SPRAYER
TO TELL YOU HIS OPINION OF IT
ACTUAL USE IS THE BEST TEST



The types made include the following:—
HAND SPRAYERS
PNEUMATIC HAND SPRAYERS
KNAPSACK SPRAYERS
PNEUMATIC KNAPSACK SPRAYERS
BUCKET PUMPS
BUCKET SPRAYERS
SINGLE WHEELED SPRAYERS
TWO WHEELED HAND POWER SPRAYER
high pressure model (220 lbs. per square inch)
CART SPRAYERS
AUTOMATIC HORSE DRAWN SPRAYERS
POWDER BELLOWS
KNAPSACK POWDER SPRAYERS
AUTOMATIC HORSE DRAWN POWDER SPRAYERS
3 H.P. MOTOR SPRAY OUTFITS
LIQUID CAPACITIES 1¾ pints to 88 gallons.
PRICES FROM 2/9 to £80 each
The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants.
Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—
COOPER, PEGLER & CO. LTD., 24d CHRISTOPHER STREET, LONDON, E.C.2.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.

Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Davis, J., Western Market.
Dennys, Lascelles Ltd., Temple Court, Melbourne.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
Mills, J. B., & Co., Bank House, Bank Place Melbourne.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, 325 Collins St., Melb.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
F. B. Bolton.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Piesse & Co., C.

Launceston.

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.

Dennis & Cooper Ltd., Covent Garden.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salters Hall Court, Spitalfields Market, E.1.

Hull.

White & Son Ltd.

Manchester.

The Port of Manchester, rep., W. J. Wade, 8 Bridge Street, Sydney.

GERMANY.

Bremen.

Fruchthandel, Gesellschaft.

Hamburg.

Astheimer, P. H., & Son, Fruchthof.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

LONDON FRUIT TRADE.

High Prices Not Anticipated by Brokers.

In view of the heavy supplies for London in the present Apple export season, a high level of price is not anticipated by M. Isaacs & Sons, fruit brokers, London. Little competition with American fruit is expected; extra care in the grading and packing of Australian fruit is urged, also the grouping of consignments to make long lines of standard varieties instead of odd lots from individual growers.

Packing on the American style is recommended—tight packs, and no strawboard or wood wool. Cases should be wire strapped. The sending of the fruit to the auction sale room, and not for sale by private treaty, is advocated.

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England and the Continent.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

AMERICAN APPLES IN ENGLAND.

Liverpool (11/1/28).

Messrs. J. C. Houghton, Liverpool, report:—

American Box Apples.—There is not as much life in this section of the trade as many people had expected, and progress is rather slow. Best Newtowns are making more money than recently, but unfortunately some of these are arriving too ripe, and with signs of unsoundness. A regrettable feature is the defective state of much of the colored class, with the exception of Winesap.

Oregon and Washington—Newtown, 10/-, 18/-; Winesap, 10/9, 14/-; Jonathan, 8/6, 12/6; Delicious, 8/3, 15/-.

Californian—Newtown, 4 tier, 13/-.

Arrivals of American and Canadian Apples for the week ending January 11, amounted to 14,378 barrels and 40,581 boxes, with 1,658 boxes Pears.

Total arrivals from the commencement of the season to January 11, were 520,737 barrels and 519,314 boxes Apples, and 14,513 barrels, and 100,021 boxes Pears, as against 982,952 barrels and 694,025 Apples, and 57,350 barrels, and 102,104 boxes Pears. In 1926 the figures for the corresponding period were 762,068 barrels and 617,909 boxes Apples, and 66,679 barrels and 104,566 boxes Pears.

AUSTRALIAN MARKETS.

New South Wales.

Sydney (17/2/28).

Mr. F. Chilton, City Fruit Markets, reports:—

Queensland Fruits.—Bananas, 12/- to 27/- per case; Pines, smoothleaf, 7/- to 14/-.

New South Wales Fruits.—Bananas, 12/- to 28/- per case; Lemons, 6/- to 15/- per bus. case; Oranges, Valencia, 8/- to 16/-; E. Apples, Jonathan, 4/- to 9/-; McIntosh and other colored varieties, 3/- to 8/-; Ck. Apples, green varieties, 3/- to 6/-; Granny Smith, 4/- to 7/-; Pears, Williams, 5/- to 7/-; other dessert sorts, 4/- to 6/-; cooking varieties, 2/6 to 5/-; Quinces, 4/- to 6/-; Passions, 5/- to 11/- per half case; Peaches, 3/- to 6/-; Plums, 2/- to 6/-; Grapes, Black Muscat, 5/- to 12/-; Black Hamburg, etc., 4/- to 7/-; White varieties, 3/- to 6/-.

Victorian Fruits.—Pears, Williams, 5/- to 7/- per bus. case; Peaches, 4/- to 9/-.

Tasmanian Fruits.—Apples, Worcester, 3/- to 7/- per bus. case; Gravenstein, 3/- to 6/-; Plums, not saleable at present; Pears, Williams, not saleable at present.

At present—and for some time past—the Sydney markets have been overloaded with most fruits in season, and low prices have been inevitable. Continued wet and sultry weather is interfering greatly with the keeping quality and also affecting the demand.

The recent glut of Victorian Williams Pears and Plums now shows signs of easing up, and improved prices may be expected for good quality lines of these fruits.

Queensland Pines are coming to hand from several districts badly affected with "Water Blister." While this annual trouble is in evidence, sales will be slow and prices will suffer.

Tasmanian shippers should note that Sydney markets are being heavily supplied with Plums, Apples and Pears of good quality from local sources, and there will be little demand for Tasmanian fruit for some time to come.

Queensland.

Brisbane (21/2/28).

Apples, Stanthorpe, eating, Jon., 6/- to 8/-; Gras., 6/- to 8/-; inferior, 3/- to 5/- bushel case; cookers, G.S., 5/- to 8/-; others, 4/- to 6/-; Lemons, 5/- to 6/- half-bushel case; Pineapples, rough leaf, 1/- to 5/- doz., 5/6 to 8/- case; smooth leaf, 1/6 to 5/- doz., 5/6 to 8/- case; Papaws, 2/- to 8/- case; Passion Fruit, 2/6 to 7/- half-case; Peaches, 2/- to 6/-; Plums, P.S., 5/- to 8/-; others, 2/- to 6/-; Grapes, white, Roma, 5/- case; Stanthorpe, 2½d. to 4½d. lb.; Black Hamburgs, 4d. to 4½d.; Black Prince, 3d. to 4d.; Royal Ascot, 3½d. to 4d.; Muscatels, 4d. to 5d.; Pears, W.B.C., 3/- to 8/- bushel case.

Tasmania.

Hobart (18/2/28).

Apples, Gravensteins, best, 3/9 to 5/-; other, 2/- to 3/6; Alf., 2/6 to 3/6; M.C., 2/6 to 2/9; Alex., 2/- to 4/-; W.F., 2/6 to 3/6; W.P.M., 2/- to 4/3; P.A., 2/- to 3/-; L.S., to 3/6; other varieties, 2/6 to 3/6; Pears, W.B.C., 1/6 to 4/6 case, according to quality; G.B., 3/-; other kinds, 1/6 to 3/-; Peaches, best lots, 5/- to 6/-; medium, 3/- to 4/-; small and over-ripe lots, 1/6 to 2/6 per half-case; Plums, light and dark, 2/- to 4/- case; Prunes, 3/6 to 4/-; Nectarines, 3/6 to 5/- per half-case; Tomatoes, market very dull, best lots, 2/6 to 3/6 case; others almost unsaleable, 1/- to 2/3 per case.

Western Australia.

Perth (18/2/28).

Apples, cookers, flats, 3/- to 5/6 (special to 7/-; dumps, 3/- to 8/6; eating, flats, 4/6 to 9/- (special to 11/6), dumps, 4/- to 10/- (special to 14/-); Pears, flats, 2/6 to 7/-; Valencias, flats, 8/6 to 14/- (special to 16/6); Peaches, flats, prime, 10/- to 16/- (special to 21/-); Grapes, open, 4/- to 8/6; Nectarines, flats, 12/- to 15/- (special to 18/6); Lemons, flats, 4/- to 9/- (special to 12/-); Strawberries, 14/6 per dozen punnets; Passion Fruit, flats, 5/- to 8/- (special to 10/-); Rock Melons, 3/- to 7/- per dozen (special to 8/-, and others from 2/-); Water Melons, 10/- to 15/- (special to 20/-), and others from 5/-); Figs, flats, 3/- to 6/-; Plums, flats, Satsuma, 10/6 to 15/- (special to 18/-); others, 5/- to 15/- (special to 21/-); Quinces, flats, 5/- to 8/6.

South Australia.

Adelaide (18/2/28).

Apples (eating), 5/- per case; cooking, 2/6; Bananas (Fiji), 27/6 to 30/-; Blackberries, 3/6 to 4/- per doz. lb.; Figs, 12/- to 13/- per case; Grapes (dark), 5/- per half-case; white, 5/-; Lemons, 20/- per case; Melons (sweet), 10/- per cwt.; do. (water), 8/-; Nectarines, 10/- per case; Oranges (blood), 20/-; Passion Fruit, 20/-; Peaches, 6/-; Pears (eating), 5/- to 6/-; cooking, 4/-; Pineapples, 14/- to 16/-; Plums (light), 4/-; Damson, 9/-; Japanese, 6/-; Prunes, 4/- to 5/-; Quinces, 5/-, Strawberries, 1/- per lb.

Victoria.

Melbourne (24/2/28).

Apples, good to choice eating, 3/- to 5/- a case; good to choice cooking, 2/- to 3/-; Grapes, Muscatels, 6/- to 8/-; Waltham, 6/- to 9/-; R. des Dames, 5/- to 7/-; Red Prince and Black Prince, 5/- to 8/-; Lemons, Vic., 12/- to 17/-; imported, 24/-; Nectarines, 3/- to 6/-; Oranges, Vic., 10/- to 16/-; imported, 22/- to 23/-; Navel Oranges, imported, 28/-; Passion Fruit, Vic., 12/- to 18/-; Peaches, good to choice dessert, 5/- to 7/-; medium dessert, 3/6 to 4/6; yellow, 3/- to 4/6; Pears, W.B.C., 3/- to 6/-; Plums, 2/- to 4/-; Pineapples, Queens, 12/- to 15/- double case; Tomatoes, 3/- to 6/- a case.

New Zealand.

Dunedin (10/2/28).

Messrs. Reilly's Central Produce Mart Ltd., report:—There is nothing further to report in the way of prices. Fruit is still continuing to come in in large quantities. Our weather is ideal for fruit eating, and prices are well maintained.

Williams Bon Chretien Pears, of which we have about 500 cases, are to-day realising from 10/- to 12/6 per bushel case. Apricots are finished. The demand for Citrus fruits is still sluggish.

Victoria

Fruit Crop Reports ∴ Re-organisation ∴ News and Notes

THE RECENT HEAVY RAINS have done incalculable good to the Apple and Pear crops in particular, and to all fruit crops in general, states the Victorian Superintendent of Horticulture in his January report.

The hot, dry weather which preceded the welcome rain caused considerable anxiety, as fruit trees in the non-irrigated areas were beginning to feel the effects of lack of moisture. The splendid rain, however, was not altogether an unmixed blessing, as the harvesting of Peach crops was somewhat retarded, consequently some growers suffered some losses, as much of the fruit became too ripe to stand a long railway journey.

Canning Peaches will be plentiful in the Northern irrigation areas; and the fruit will be large and of good quality. The Peach crop is heavy in all parts of the State. The white-flesh dessert Peaches of the metropolitan districts are plentiful.

The **Pear crop** is uniformly good. In the Northern districts the crop was thought to be on the light side, but it is turning out much better than expected, owing to the fruit being much above the average in size. It may be said that all canning fruit will be of excellent quality.

The **Apple crop** will be heavy, and our shipments to European markets will be a record one, some 850,000 cases of Apples and approximately 118,000 packages of Pears will be exported from Victoria during the present season. Previous to this year, the largest quantity of fresh fruit shipped from this State has not exceeded approx. 550,000 cases in any one year.

The fruit crop as a whole is still remarkably free from disease, although the weather conditions are very favourable to the development of Brown Rot and other fungi. Codlin Moth has been very effectively controlled.

Passion Vines have recovered from the damage caused by Winter frosts, and the Autumn crop of this fruit promises well.

The Prune crop is good, although during the hot spell there was a heavy drop, which caused anxiety.

Viticulture.

The year ended hot and dry, with a rainfall several inches below the average. At Rutherglen Viticultural Station only 15.39 inches was recorded, as against last year's 26 inches, the average being 21 inches. The new year commenced hot and dry with temperatures up to 107 deg. being recorded at the Rutherglen Viticultural Station. The vines, which had stood the dry conditions remarkably well, were beginning to show signs of distress.

A welcome break in the weather occurred on the 17th January, which has completely changed the outlook, heavy rain being recorded. On the whole, the vineyards of the State are looking remarkably well, and free from disease. A hailstorm at Red Cliffs early in the month did a good deal of damage.

Citrus.

Bounteous rains have fallen all through the State, but lightest in the North-West (Mildura). The Orange crop is showing well in all parts of the State, and from present indications should be equal to last season. Lemons are in good demand, and prices at present obtaining are about equal to last season's, the indications being for higher prices during April.

METROPOLITAN FRUITGROWERS' ASSOCIATION.

At the February meeting of the Metropolitan Fruitgrowers' Association, held at Box Hill (Mr. R. M. Finlay presiding), it was decided to thank Dr. Philpots for his great efforts to encourage fruit consumption and to ask the Development and Migration Commission to utilise his services: a bigger consumption of fruit would result in a more stable market for fruitgrowers, and would allow for a subsequent increase in plantings where warranted.

It was decided to endeavour to arrange for a depot at the Victoria Market, where the public could leave their purchased fruit for delivery to the suburbs by a firm of carriers.

It was reported that the daily market was a success so far. The new open-air market at Ivanhoe was appreciated by the public.

Mr. R. E. Boardman gave an address relating his experiences in U.S.A. and England, and was accorded a vote of thanks.

VICTORIAN ORGANISATIONS.

Winding-up Proposed.

Both the Victorian Fruit Council and the Apple and Pear Growers' Association are finding it difficult to carry on.

It was stated by Mr. Brown, of Pakenham, that the question of "export control" had split the industry and caused discord.

The question of reorganisation will be dealt with at the annual meeting, which will be held at Warrnambool in May.

NEW FRUIT ORGANISATION.

Fruit Marketing Advancement League.

An organisation known as the Fruit Marketing Advancement League has been formed in the Goulburn Valley, Victoria, with Mr. J. A. Henderson, of Tatura, as Secretary.

For some years Mr. Henderson has been active in recommending the formation of such an association. The new scheme is that of a fruit exchange, and is designed to market all the fruit grown in Victoria. It is proposed to establish local branches or packing companies, growers to be under bond to ensure that the Exchange would be the sole marketing agency. It is hoped by these means to achieve standardisation, regulation of markets, and the improvement of transport and the elimination of gluts.

The State would be zoned for distribution purposes. Prices to be fixed and published a week in advance. Distribution for the other States and overseas to be regulated by cool stores.

PERSONAL

Mr. H. Raymond Black, fruitgrower, of Tally Ho, Victoria, has just returned from a visit to the United States, England, and the Continent. Mr. Black spent some months among the orchards and vineyards of California, Oregon, and Washington, and the orchards of Eastern U.S.A. In England he inspected the markets and other places of interest, being particularly impressed with the splendid research work on fruit tree stocks, at the East Malling Experiment Station in Kent.

Following the good work of the Ministry of Agriculture in England, Mr. Black believes that there will be a revival of fruitgrowing in England. For clean, well-grown English fruit, nicely graded and packed, there should be a big demand, instead of buyers finding it necessary to import such large quantities from the United States.

Mr. Black is convinced that soil and climatic conditions in Australia are unexcelled for fruit production, but he speaks favorably of the co-operative organisations among American fruitgrowers.

Curdies River.—There are several prosperous orchards in this favored section of the Western District of Victoria. Last year excellent prices were received, from 13/9 to 15/3 per case. The fruit assumes a high color, due, in some measure, it is believed, to the use of unburned lime, of which there are large deposits in this district.

Mr. A. Brown, orchardist, of Curdies River, recently visited Doncaster and other fruit centres, where he favorably demonstrated the value of the lime from his district.

THE ETERNAL SUGAR PROBLEM.

High Price of Sugar Restricts the Sale of Fruit.

The President of the Housewives' Association, Mrs. Glencross, has submitted evidence showing that housewives are making less jam than ever because of the high price of sugar, and that for this reason there is a great falling off in the demand of fruit by housewives for home-made jam.

The renewal of the Sugar Agreement, and consequently the continuance of the embargo on importations, is being vigorously opposed.

RED HILL & DISTRICT
Agricultural & Horticultural Society
SEVENTH
ANNUAL SHOW

to be held on
SHOW GROUNDS
(Opposite State School).
WEDNESDAY MARCH 21, 1928

To be opened by
Mr. Downward, M.L.A.
Luncheon, Afternoon Tea, Hot Water in Pavilion on Ground.
Hurdles, Log Chop, Bending Race, and Barrel and High Jump, Flag Race, Trot.
No Side Shows admitted . . to the Grounds. . .
Splendid Fruit, Vegetable, Farm Produce, Horse, Flower, Fancy Work, ... Cookery Sections. . . . . .
Take a trip to a very pretty apple growing district.

ADMISSION, 1/6 - CHILDREN, 6d.
Members' Tickets 5/- admit Lady & Gent.

Donations of Cash or Kind thankfully received.
Grand Dance at Night.
Further particulars, Schedules and Entry Forms obtainable from the Secretary—
H. W. AMOS, Hon. Secretary,
'Phone: 7. Red Hill.
Hours Strictly 4.15—6 p.m.

ANSWERS TO CORRESPONDENTS.

A reader at Lower Chittering, W.A., asks for information about growing Grape Fruit, particularly the stage of maturity at which to pick.

Answer (by S. A. Cock, Citriculturist).—Grape Fruit is picked in Victoria in June, July, August and September, when the rind is fully colored and the pulp mature. They improve in flavor by storage, and in this way they can, in a measure, be treated very similar to the curing of Lemons.

We have no bulletin dealing with Pomelo picking, but the remarks made cover the methods adopted in this State.

Answer (by G. W. Wickens, Superintendent of Horticulture, W. Aust.).—Grape Fruits are not grown in any quantity in this State, and I have not had experience of the best time for gathering. My own opinion, however, is that they should be fully colored before being picked.

Coit, in "Citrus Fruits" has a paragraph dealing with picking Pomelos (Grape Fruits) under Californian conditions, which may be of some interest, thus:—

"Pomelos are picked from the middle of December to the following August and many growers keep some fruit for home use on the trees the year round. Ordinarily, the fruit is stored in lug-boxes for few days until the rind becomes soft and pliable. After this the fruit is packed in Orange boxes and handled like Oranges. Pomelos improve somewhat in flavor with storage and proper curing, and for best results this fruit should be very carefully picked in February or March, and held in storage precisely as are Lemons until May, June and July."

So far as I am aware, New South Wales is the only State in Australia where Grape Fruits are being grown in commercial quantities.

FRUIT TREE CATALOGUE.

The 1928 catalogue of fruit trees is to hand from C. J. Goodman's Nurseries at Bairnsdale, Vic. A full range of fruit trees is listed. The catalogue is a nice, comprehensive production, and, in addition to the information re fruit trees, many valued cultural hints are given. Copies may be obtained on early application to the firm.

AUSTRALIAN DRIED FRUITS.

Sales in London.

The Chairman of the Commonwealth Dried Fruits Control Board advises that sales of Australian dried fruits in Great Britain, recorded with the London Agency of the Board, for the week ending February 16, represented:—

Sultanas, 141 tons, at an average of £56/10/9 a ton.

The total realisations to date of this season's fruit in Great Britain are:—

Sultanas, 17,433 tons, average £58/3/8 a ton; Currants, 4,798 tons, average £42/10/6; Lexias, 1,931 tons, average £44/0/6.

Irrigation Hose in heavy Finest Scotch Duck

	A	B	C
3-inch	5d.	6d.	7d. per foot.
4-inch	6d.	7d.	8d. „ „
5½-inch	7½d.	9d.	10d. „ „
7-inch	10d.	12d.	13d. „ „
9-inch	14d.	17d.	18d. „ „
11-inch	16d.	18d.	19d. „ „

HAY STACK COVERS
For Hay and Lucerne Stacks, etc.

	3-Star.	4-Star.
12 x 20	£2 3 0	£3 1 6
12 x 24	2 13 6	3 15 0
18 x 20	3 15 0	4 11 0
18 x 24	4 2 6	5 9 0
18 x 30	5 2 0	6 15 0
21 x 30	5 17 6	7 17 6

We can supply these covers in any length, 3 ft., 6 ft, and 9 ft. wide, suitable for covering drying racks.
Any other size at same rates. Ropes, 3/6 Extra.
Verandah Blinds, Window Blinds, Duck Tarpaulins, Tents, Camp Stretchers and all Classes of Canvas Goods.
Large Stocks of First-class Secondhand Sacks.
Please write for prices and samples.

WYETT MFG. CO. PTY. LTD.
21-23 BELLARINE STREET, GEELONG, VICTORIA.
'Phone 1688.

CITRUS FRUITS.

News and Notes.

(See also p. 103.)

VALENCIA LATE ORANGES.

Colouring by Ethylene Gas.

(By G. B. Tindale, B.Ag.Sc., in the Victorian "Journal of Agriculture.")

THE USE of ethylene gas for colouring citrus fruits and Tomatoes has become quite a common practice in the United States of America, and this season experiments were carried out at the Government Cool Store, Melbourne, to test the process under our conditions. The experiments were interesting, in so far as they indicated that under certain conditions the gas may be of great assistance to the citrus-grower. On the other hand, if these conditions do not prevail, then little success can be hoped for.

The experiments showed that with Valencia Late Oranges which are mature, but have turned green again owing to irrigation or unfavourable weather conditions, the gas will change the dingy green to a bright yellow, provided that a suitable range of temperatures prevails in the gas box. But there is little chance of success when the fruit is immature, and even excessive applications of the gas failed to produce a colour beyond that of a dingy yellow.

This is indeed somewhat fortunate, for it prevents unscrupulous people from colouring immature fruit and exposing the same for sale as being mature.

The Actual Process

of colouring is very simple. A gas-proof box is required with a close-fitting door. The box can conveniently be 6 feet high so that a man may be able to enter it to stack the cases. A small hole should be made so as to insert a thermometer, which could be placed in such a way that the bulb is within the box, while the mercury column is without, so making temperature recording a simple process. The temperature required is between 75 deg. and 85 deg. F., and in order to secure and maintain this in our experiments a four-bulb electric radiator was placed inside the box. This was controlled by an external switch.

The concentration of ethylene required is 1 cubic foot of gas per 1,000 cubic feet of space, and although this mixture is not explosive, yet should the mixture by accident become a rich one, there is a risk from naked flames. Thus the heating apparatus, to secure a satisfactory temperature, should be of such a type that there is no free flame.

In many parts of Victoria there is little difficulty in naturally maintaining the range of temperatures required for the colouring.

The gas is contained in a small portable cylinder, to which is attached a measuring gauge; this measures the number of cubic feet of gas passing per minute. The gas enters the box through a rubber tube which joins the measuring gauge to a small tap leading into the box.

The Correct Amount of Gas

should be applied at not less than eight-hour intervals. Under the most favourable conditions in the recent experiments, we were able to colour up mature but green Valencia Late Oranges after six applications.

The gas used for the experiments was kindly supplied by the Australian Oxygen and Industrial Gases Company, Latrobe-street, Melbourne, while we were indebted to Messrs. P. Rossiter, of Cobram, and F. MacMullen, Bamawm, for the fruit required.

SOUTH AFRICA'S CITRUS INDUSTRY.

Production Likely to be Doubled.

That the South African Citrus fruit industry is growing rapidly is amply evidenced by the results of a special census of commercial Citrus fruit trees recently made by the Office of Census and Statistics of the Union of South Africa (states the Australian Department of Markets). According to this census, there are in the Union at the present time 2,535,009 commercial Orange trees (Navels and Valencias), 97,590 commercial Grapefruit trees, and 516,000 trees of other Citrus fruit, such as Tangerines and Lemons.

The census shows that 59 per cent. of the Orange trees and 84 per cent. of the Grapefruit trees are below five years of age, from which the conclusion may be drawn that within a relatively short period twice the volume of Citrus fruit will be coming forward for export from South Africa than is the case at present. Moreover, the census shows that an additional 671,730 Orange and 106,095 Grapefruit trees are to be planted within the next two or three years.

AUSTRALIAN ORANGES IN ENGLAND.

Experimental Shipment Succeeds.

Interest attaches to an experiment made with a cargo of 235 cases of South Australian Oranges, shipped to Great Britain by the "Bendigo." Excluding six cases in various wrappers, which were sent for special investigation to Dr. Barker, of Cambridge University, half of the cargo was carried in cold chambers, and the balance under ordinary cargo conditions between decks, without even a through draught. In appearance and condition there was no difference between the two lots, but on being tasted, those carried in cold store showed a fuller and finer flavor. The wastage was 1½ per cent. on large fruit, and none on the smaller fruit. The results are considered excellent, and were unexpected.—"Imperial Food Journal."

CITRUS INDUSTRY IN U.S.A.

In 35 years the citrus fruit crops have increased tenfold, from 5,000,000 to 50,000,000 boxes annually. A series of profitable years during and immediately after the war led to an expansion of acreage which is not yet in full bearing, so the prospect is for considerably increased production within a few years. In the five years from 1920 to 1924 nearly 10,000,000 Orange trees were planted in Florida, where the number of trees bearing fruit in 1924 numbered only 7,306,000.

It is reported that red scale of Citrus trees is being successfully controlled in Western Australia by the use of the parasite Aphelinus diaspidis.

Neptune Oils.—The Neptune Oil Co. Ltd. draws attention by advertisement to a rumour which gained circulation that they were ceasing the manufacture and distribution of spraying materials. To this the company has issued a denial, and states that their representative, Mr. H. G. Pearson, is visiting the various fruit districts to obtain orders for the supply of spraying materials in which the company has specialised for many years past.

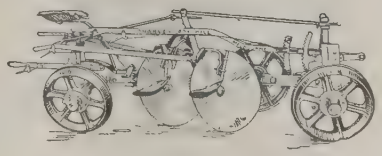
Brisbane Fruit Trade.—Messrs. F. B. Bolton and Co., of Albert House, Brisbane, Queensland, advertise that they are brokers and selling agents for fresh, dried and canned fruit, also freight agents. The firm sells to wholesale distributors only, and acts for canners and packers desiring a wide distribution.

"HARVEY" IMPLEMENTS ENSURE SATISFACTION

THE SECRET OF GOOD CULTIVATION IS EFFICIENT MACHINERY

"Harvey" Single Furrow Orchard Plow.

These Implements will plow on or off right to the Butts of the Trees.



"Harvey" Heavy Furrow Orchard Disc Plow.

Subsoil Plow.

Every Grower knows the value of Sub-soiling. By its use the production of arid lands and worn-out plantations are increased.
Perfect regulation of depth obtained.

The "Harvey" Patent Orchard and Farm Harness eliminates the havoc done by chains and swinging-bars. No Broken Branches. No Barked Trees. No loose chains to become entangled in the horse's legs when turning. Adjustable to suit a low or high draught implement. **You cannot afford to be without it.**

"Harvey" Patent Orchard Harness.

"ELLISIZE" YOUR FRUIT with the ELLIS GRADER

APPLES, ORANGES, POTATOES, ONIONS
and all classes of other Fruits
PERFECT GRADING NO BRUISING

It is the cheapest-priced Sizer offered, and is so simple that it is the cheapest in the long run. Can be removed from place to place in your orchard wherever you desire to grade.

The Grader with only ONE moving element

One simple adjustment will give this variation in size:—4-5 grades, 7-8 grades.

Write for particulars.

PRICE: Grader only £16. with Table & Hopper £21 10

We Manufacture a Full Range of Special Tractor Orchard Implements

Write for Catalogue, stating either Tractor or Horse Drawn Implements.

D. HARVEY, ORCHARD IMPLEMENT MAKER
BOX HILL, MELBOURNE, AUST.

SHOW ROOMS, 440 ELIZABETH STREET, MELBOURNE. AGENTS ALL STATES.

A Regular Supply of Eggs from FEBRUARY TO FEBRUARY

CIRCUMSTANCES over which we have no control often influence our actions, and it is probable that in this fact lies the reason for Mr. P. Veevers, whose testimonial we give below, choosing February as the month in which to commence giving his fowls KARSWOOD POULTRY SPICE. This month is the worst in the year for poultry; it is the most trying and enervating, and, in addition, practically heralds the approach of the moulting season. Further, it means that in the twelve months referred to this "worst" period occurred twice; yet, despite this fact, Mr. Veevers' fowls continued laying right throughout the whole year. After such an achievement as this, can anyone doubt the value of KARSWOOD POULTRY SPICE (which contains dried and ground insects)? As Mr. Veevers himself says:—

"Facts Speak for Themselves."

"I am sending you some results from feeding with KARSWOOD SPICE. I commenced feeding with KARSWOOD last February, and the effect was quickly noticeable. I started with seven White Leghorns and seven Black Orpington Pullets, and one old Black Orpington hen, and no rooster. From February 8 to February 8 of this year, they laid 2,565 eggs, or an average of 171 eggs each for twelve months; the highest production was 310 for one month, and they showed a profit of £10/10/-. Facts speak for themselves."

(Signed) P. VEEVERS,
Federal Avenue, Ashfield.

Make This Test.

Go to your local grocer, storekeeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results; Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Supplies.

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices, ½ lb. packet, 1/-; 1 lb. packet, 2/-; 7 lb. tin, 13/-; 14 lb. tin, 25/-; 28 lb. tin, 48/-.

Note the Economy.

1/- packet supplies 20 hens for 16 days; 2/- packet supplies 20 hens for 32 days; 13/- (7 lb. tin) supplies 140 hens for 32 days.

27/46

POULTRY NOTES.

Work for March.

THE principal work for the month will be the disposal of the balance of the third-year hens as they go off laying, and of the cockerels not required for stud purposes, together with close attention to the pullets that have come on to lay, or that are commencing. As regards pullets that are coming on to lay, there should be so few to cull (except obviously weedy specimens) that in good average quality stock it will matter little whether they are culled or not. In low-class stock there may be much culling to do, of course, but here again they will only be obviously poor specimens.

There is again a tendency to boost a certain system of measurement-testing, and beginners will do well to be careful about classing pullets as poor layers. During the last revival of these selecting systems, thousands of potentially good laying pullets were marketed as culls because they did not answer to the measurements set out. This was due to misunderstanding, and consequent misapplication, of what was perhaps meant to assist poultrymen in selection. The writer has witnessed the rejection of hundreds of pullets because (according to the system) their pelvic bones were not sufficiently wide apart. The fact was that the birds were not in laying condition, and therefore not likely to answer the measurements sought for.

The essential fact for the novice to remember is (as has been previously explained) that the expansion and contraction of width between the pelvic bones is much in proportion to the development of the oocytes (rudimentary yolk) on the ovacluster at any particular period, and the bones of a pullet that has not commenced to lay or is not closely approaching that point will still be fairly close together. **The distance between the pelvic bones in this case is no criterion whatever of laying qualities.** In other words, the pullet or hen must actually be in full lay before the pelvic bones are any guide to her value as a layer; even then the actual width is not an infallible guide in all cases.

Management of Pullets.

Apart altogether from the actual inherent laying qualities of pullets, the general management of them is of the utmost importance in respect of the volume of production. A good manager will often secure twice the production from a flock that an indifferent one would. Taking an average flock, management, including feeding, is the main factor in securing results. The poor laying flock more often than not reflects bad management rather than faulty breeding. This assertion might appear in the nature of heresy to those who stake everything on breeding, but it is based on experience and a wide range of observation.

Feeding and housing are the two main factors in management. With regard to feeding, even my advice to feed full and plenty, for instance, is often construed into leaving plenty to lie about the yards. Such a practice means surfeit, which in turn results in a stagnant state of health and a consequent falling off of production. Only birds up to concert pitch in health are likely to lay well, and feeding has so much to do with this that it becomes a prime factor in production. The feeder should aim at so paying out the feed that the birds will always be just ready for it, and this without, on the one hand, giving them less than they require to maintain body waste, with a surplus for the production of eggs, or, on the other hand, feeding to a surfeit. Appetite will regulate all this providing it is not satiated. Some over-feed, while others do the reverse; both courses lead equally to loss of production.

The moral for the farmer is to take more time over the operation of feeding, so as to be able to gauge the requirements of the birds. It is no use objecting that one has not time to give to this kind of thing. The poultry farmer who has no time to attend to his birds properly will soon be out of the business in any case, or he will at any rate be among those who call poultry farming a failure.

These remarks apply equally to all classes of hens, young and old, fat and lean. For the over-fat hen that does not lay eggs in payable quantity there is only one thing—quit her. The farmer cannot afford to starve the flock to deal with a few lazy hens, which in any case probably cannot be starved into becoming producers.

It may be queried, "what about dry mash feeding," in which system there is food always before the birds. The reply is that the dry-mash feeder who fails to supplement his mash, and who relies solely upon the fact of feed being always before the birds, cannot be regarded as a skilled feeder in any case, nor are the best results likely to be obtained in such mechanical feeding. But in any case there is a saving clause in dry-mash feeding, which to some extent prevents surfeiting—the dry mash is not sufficiently palatable to induce over-feeding. As a matter of fact, dry mash feeding with the addition of grain at evening is preferable to unskilled feeding. The skilful feeder on the older method, however, will get the better results.

One thing in particular should be borne in mind in connection with feeding at this time of the year—that is, it is a mistake to change the ration. This does not mean that no variation may take place, but that any material change from food the birds are accustomed to will have the effect of putting them off laying. A change from wet to dry mash of vice versa, or from one grain to another, except by way of proportions, is not advisable, and the worst feature is that if either hens or pullets stop laying at this time of the year it is almost certain to result in a moult. In the case of pullets a couple of months laying may be lost, while with hens probably four months or more will elapse before they start again.—Jas. Hadlington, Poultry Expert, N.S.W. Department of Agriculture.

EXTRACTING THE HONEY CROP.

THE MAIN honeyflow draws to a close in midsummer (writes L. H. Cobb in the "American Bee Journal"). By the first of August (February in Australia) most of the honey is ripened and ready to take off, though it can remain on the hives until late fall without injury, save that if there is a fall flow any frame not filled and sealed will be finished with autumn nectar, which is generally darker than that produced by the early bloomers. Those who make it a business aim to extract the main flow before the autumn flow begins. It is from white and sweet clover, bass-

wood or other flowers that yield a pure white nectar that is mild in flavour. The later flowers, such as mints, horehound, pansy, etc., yield darker honey that has the more decided flavour of the particular flower.

Those who have but small apiaries can often rent an extractor, and where several small apiaries are close together the extractor can be owned together. Extracting never needs to be done at any particular time. Even if we wish to keep the flows separate, we can remove the frames and store in a warm, dry place in the supers, being sure there is no chance for mice or bugs to get inside, and then do all the extracting at one time.

Honey is one of the easiest products to keep, dampness alone having much effect on it. After extracting, if put into glass fruit jars it can be kept anywhere, but it will granulate if exposed to severe freezing. However, it is easily melted again by setting jars in hot water. As fruit jars are ideal for marketing the honey locally, it saves time and trouble to jar up just as it is extracted.

The beekeeper with tons of honey to extract has his steam or electrically heated knife for uncapping, his power extractor, his capping melter to prepare the wax for sale, and every device he can provide for getting the honey ready with the minimum of labour, but we had to content ourselves with a simple uncapping knife, a hand-turned, two-frame extractor, and a home-made sun wax extractor, but we got along nicely. When two of us uncapped, one used a sharp butcher knife with not much difference in results.

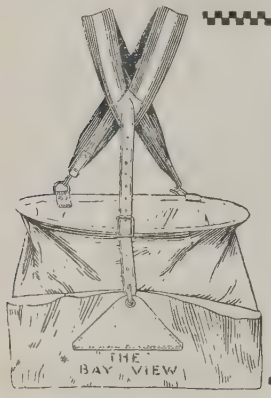
When extracting, the important point is to keep as little honey exposed as possible, for it excites the bees and is likely to start robbing. The work should be done in a screened room and openings made near the tops of door and windows to allow the escape of bees. It is seldom necessary to use bee escapes, as bees are not likely to find the openings to get in.

We always put the empty frames in their supers and pile one over the other on a bottom board, with the entrance closed so only one or two bees could go in and out at once. A cover is placed on top. The bees will clean up all the honey the extractor does not remove.

The cappings shaved off of the honey to permit the extractor to throw it out, are placed in a strainer to drain out all the honey. A warm room hastens the draining. If put in a coarse muslin bag, the cappings can be crushed and wrung and most of the honey forced out quickly.

A sun wax melter is easily made, and is best if there is any old comb to be melted. Cappings from new comb contain little refuse, but old comb will have old cocoons, propolis, and such stuff, that does no harm to the honey, but is best removed by the sun extractor. This is a glass-covered box with a shelf of tin sloping toward a square pan that is to catch the honey and wax that run off while the refuse remains on the tin shelf when exposed to the sun's heat through the glass. This is useful to melt granulated honey also, removing the tin shelf and setting the glass jars inside.

Cappings from fresh new comb may be melted by placing in a vessel and setting in water hot enough to melt the wax. The honey and dregs settle to the bottom and the wax hardens on top as it cools. It does the same thing in the pan of the sun extractor. One year we simply dumped all the cappings into a boiler of clean hot water, rinsed all the knives and the extractor in clean hot water also, and when we removed the hardened wax we strained the sweet honey-filled water and added it to the vinegar, and it made a good vinegar in a few months.



"Bay View" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

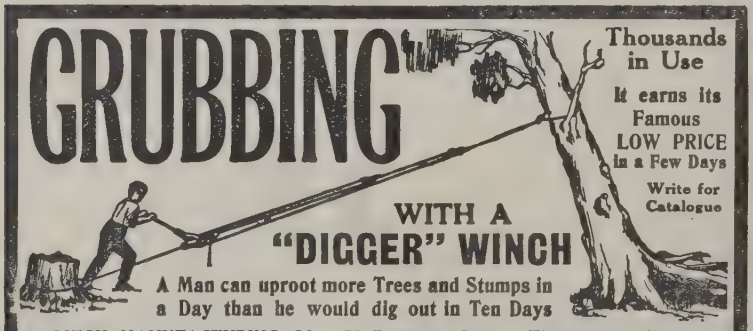
Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

GRUBBING WITH A "DIGGER" WINCH



Thousands in Use

It earns its Famous LOW PRICE in a Few Days

Write for Catalogue

A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days

QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

SYDNEY ROYAL SHOW.

Big Fruit Prizes.

The Easter Show of the Royal Agricultural Society of N.S.W. will be held at Moore Park, Sydney, from April 2nd to 11th, 1928. There is a generous list of prizes in the fruit section, as in the other sections of this big and important Show.

A very liberal donation has been received by the Society from the Orient Steam Navigation Co. Ltd., in celebration of the Orient Line jubilee. The company's wish was to provide classes that would be open for competition throughout the Commonwealth, and it has been decided that two classes should be provided for export butter, one for salted and the other for unsalted.

A further £25 and a silver cup valued at £15/15/- has been also donated by the Orient Steam Navigation Co. Ltd. for export Apples, two cases (of distinct varieties), to be shown at the Easter Show and judged there; two cases to be sent to London and judged there, the exhibitor gaining the highest aggregate points on both judgings to secure the prize.

Growers throughout the Commonwealth are keenly interested in the competition, and. as the Apple crop this season is exceptionally heavy, big entries may be looked for.

CONTROL OF CODLIN MOTH.

ONE OF THE WORST PESTS of the Apple industry in Australia is the Codlin or Codling Moth (Cydia pomonella). Many experiments have been carried out in various places in regard to control, and the Victorian Department of Agriculture recently published a bulletin by its Entomologists, Messrs. C. French, Jnr., and G. T. Levick, summarising the life history of the moth and remedial measures to be adopted. The latter are quoted hereunder:—

Remedial Measures.

Orchard Sanitation.—This is by far the most important feature of codlin moth control, and frequently the most neglected. The high percentage of infection in the vicinity of the fruit houses and packing sheds, often in spite of extra sprays, shows very clearly that sprays, however carefully applied, cannot cope with the pest unless the orchard is kept clean.

At the end of each season the orchardist should take particular care to free his packing sheds and surroundings from the codlin grubs which have crawled from infested Apples and made cocoons in cracks and sheltered places. The provision of moth-proof fly wire screens over doors and windows to prevent egress of emerging moths is a simple and inexpensive method wherever practicable.

Cases used in transporting fruit from the orchards, and all returned cases, should be examined, and any grubs in them killed. The best method is to dip all cases in boiling water, to every 20 gallons of which a pound of washing soda has been added. An immersion of two minutes in this solution is desirable. This treatment has a double effect, in that it destroys the spores of mould and other fungi as well as all insect pests hidden in the cases.

Gather Windfalls Regularly.

As most windfalls are affected with codlin, they should be gathered up once a week during the Apple-growing season, and destroyed by burning or boiling, or else fed to pigs. If the Apples are given to pigs, it is essential that they be fed as soon as gathered, for if they are stored they soon become a hatchery for the moths. It is also payable to have all infected Apples picked at least once or twice during the season and treated as suggested above.

Poles and props used in the orchard should be kept free from bark and examined for codlins. This is a very important precaution, upwards of 80 grubs having been found on one pole in an orchard last season.

Spraying With Arsenates

has been the standard method of dealing with the codlin moth pest since sprays were introduced about the beginning of the present century, and with the improved spraying material and apparatus for use in application, it appeared that this was quite an efficient control. However, in recent years, both in America and the warmer portions of Victoria, the control of the codlin by arsenates has not been entirely satisfactory, though there is little doubt that more thorough methods of application would lead to a decided improvement.

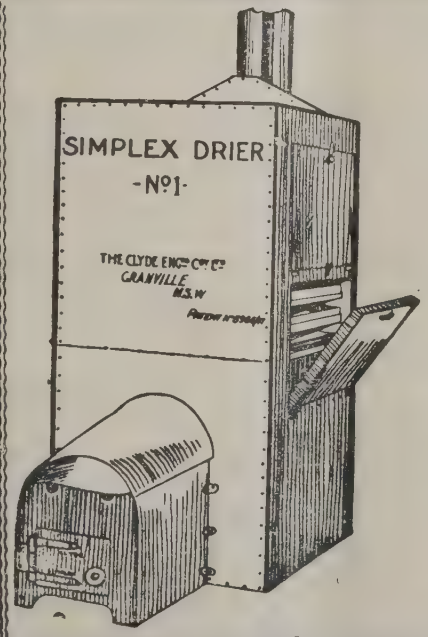
In consequence of the apparent partial ineffectiveness of the arsenicals, and also the restrictions imposed by Great Britain in regard to the amount of arsenic allowed on imported fruit, attention has been directed towards other methods of control which had been abandoned in favour of spraying.

However, up to date there has been no evidence that spraying with arsenical spray mixtures is likely to be replaced by other methods.

Bandaging the trees, trapping the moths, and the application of oil ovicides are useful, and in some parts apparently essential adjuncts to spraying, but in no sense can they be considered a substitute.

Arsenate of lead, either in the powder or the paste form, has displaced all other arsenical preparations, and is by far the safest and most efficient. It is necessary to apply all sprays thoroughly, and with a pressure of about 250lb. per square inch for best results.

The quantities of arsenate of lead should be weighed out; good results cannot be expected when the quantities



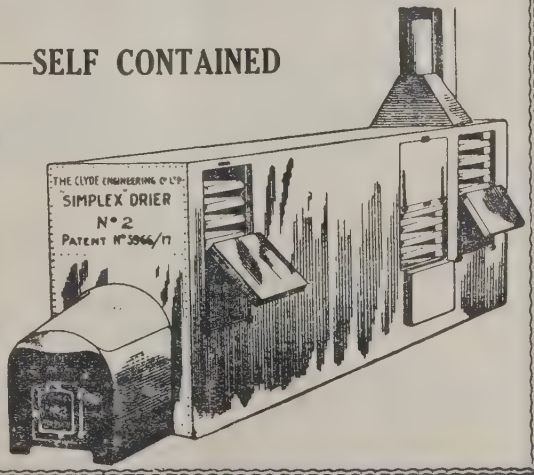
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ld.
GRANVILLE, N.S.W.

"VOLCK"

WHITE OIL EMULSION

THE NEW QUICK BREAKING OIL SPRAY FOR CITRUS AND DECIDUOUS FRUIT TREES

"VOLCK" is a patented oil spray.

"VOLCK" is manufactured by the California Spray Chemical Co., at Watsonville, California, U.S.A., by a highly-trained staff of CHEMISTS and ENTOMOLOGISTS, and is the result of many years study of the action of SPRAY OIL from the insecticidal and toxic standpoint on scale and insects affecting citrus and other fruit trees.

"VOLCK" DOES NOT BURN THE FOLIAGE.

"VOLCK" CAN BE USED DURING ANY WEATHER TEMPERATURE.

"VOLCK" does not require the addition of any soaps or other emulsifying agents.

"VOLCK" is a perfect emulsion which mixes readily with water and remains emulsified without forming any globules of free oil.

"VOLCK" will kill every Black and Brown Scale it hits, and is more effective than any other known Oil Emulsion for the destruction of Red Scale.

THIS IS THE TIME TO SPRAY.

Spray for Red Scale now, and for Black and Brown Scale in the months of March and April, when the growing scale have emerged from the eggs.

"VOLCK" is used at 2 PER CENT. strength.

"VOLCK" MAY NOT BE AS CHEAP as other oil emulsions, but it is more effective, and is absolutely safe for any grower to use under any weather conditions.

Write for literature regarding VOLCK.

VICTORIA:

H. C. PANNIFEX & CO.,
26 Market Street, Melbourne.
Telephone: 7375, 7376.

QUEENSLAND & NEW SOUTH WALES:

AUSTRALIAN FRUIT & PRODUCE CO.,
Fruit Exchange, Sydney;
and at Newcastle and Brisbane.

are merely guessed at. It is advisable to fill the pump with the required amount of water, and start the engine before adding the arsenate, otherwise the arsenate will sink to the bottom, and the first trees will get a strong spray, and that given to the rest will be too weak.

The agitators supplied on power pumps are quite efficient in keeping the arsenate of lead in suspension, but once it has been allowed to settle on the bottom an uneven spraying is almost bound to result.

Spray Tables.

(a) Calyx Spray.—This spray should be applied immediately the petals have fallen from the blossom and before the calyx closes. Recent experiments have indicated that a stronger solution, 4lb. of powder in 80 gallons of water, is more effective than the usual strength (2½lb. in 80 gallons). It is considered by some growers that it is not necessary, for in many seasons the first moths have not emerged at this time, but as the majority of the first brood grubs, irrespective of the time of emergence of the moths, enter through the calyx, this spray is very essential in all cases.

(b) Cover Spray.—The cover spray is applied at the normal strength (2½lb. powdered arsenate in 80 gallons of water) about three weeks later than the Calyx spray. It is designed to cover the young fruit and protect them from the grubs of the first brood, which would attack the Apples at other places than the calyx.

(c) Other Cover Sprays.—The number of cover sprays necessary will vary with the district and the season, one spraying every four or five weeks being necessary in districts where the codlin is a serious pest.

Spreaders, generally composed of calcium caseinate, have been advocated for use with the arsenate of lead sprays as giving a more even coating of arsenic to the fruit. An analysis of experiments carried out in other countries, however, seems to show that the use of spreader is of rather doubtful value in increasing the efficacy of the arsenate, whilst it is apt to be responsible for larger amounts of residual arsenic on the fruit when it reaches the consumer.

Ovicidal Sprays.

A special summer oil spray has been used in America with the object of killing the eggs of the codlin moth, but has not yet been tested here, though it is hoped to try this type of spray in the coming season.

Bandaging.

By "bandaging" is meant the tying of bands, generally of hessian, around the trunks of Apple trees, from which all rough bark has been removed. The codlin grubs are then forced, through lack of other shelter, to pupate within the bands, which may be periodically examined and the grubs destroyed.

In bandaging, the following points need special attention:—

1. Scraping the trees: All rough bark must be thoroughly removed, otherwise half the efficacy of the band is lost.

2. The material used must be of a fairly thick and close character. Strips from a wool bale are perhaps the best, whilst bran bags are practically useless on account of the openness of the weave.

3. Bands should be examined every week, otherwise they form ideal breeding grounds for the codlin, and unless this condition is complied with, it is much better to have no bandages at all.

When these conditions are carefully carried out, it will be found that bandaging is an exceedingly useful adjunct to spraying. The cost is not excessive. If the bandages are cut from old wool packs they will cost less than 1d. each for material and labour in cutting them, while a man will bandage about 400 trees in a day.

Use of Traps or Lures.

Quite a considerable amount of work has been done in various parts of the world in the way of testing various substances for use as lures. Apple jelly was used in Germany in 1895, and since then, of all the preparations tested, vinegar and fermented Apple juice appear to be the sole survivors. There are many conflicting opinions as to the probable and actual efficacy of lures, but it appears that in certain districts their use may be a useful adjunct to the other methods of codlin moth control. The selected

material, generally fermented Apple juice diluted with an equal quantity of water, is placed in a container, often of tin, but preferably glass, which is hung in every second or third tree in the row. It is found that the best place to set the traps is in the upper third of the tree, as they catch many more moths in this position.

The moths are attracted to the fermenting juice, fall into it and are drowned. The material needs renewing about once a week.

Considerable numbers of moths are caught, and of some 600 individuals examined this year, an average of about 50 per cent. were found to be females.

FIGHTING INSECT PESTS.

Citrus Scales.

The young scales are now moving. Trees should be sprayed with Red Oil or fumigated.

Orange Butterfly.

See "The Fruit World," February 1st, 1928, p. 72.

Soldier or Harlequin Fruit Bug.

These red and black plant bugs are plentiful in the Apple orchard. They are provided with strong sucking beaks, which they insert into the fruits, principally Apples and Grapes, and suck out the juices, causing the fruits to become discoloured, and often to shrivel up. Spray with benzole emulsion, Black-leaf 40, nicotine sulphate, or tar water. Tar water is prepared as follows:—Boil 1 lb. coal tar in 2 gallons of water, and while hot add from 50 to 100 gallons of water. Phenyle spray is also recommended.

Apple Pinara or Snout Moth of Apple.

A native insect. The large greyish caterpillars, resembling the bark of the tree, are very destructive to the fruit spurs of fruit trees. During February these caterpillars are usually plentiful.

Spray with arsenate of lead.

Bryobia Mite.

Owing to the hot and dry weather, Bryobia Mites have made much headway this season. They have been particularly numerous on Peach and Apple trees. It is advisable to spray at once to destroy the mites before they commence egg-laying. Use any of the nicotine sprays. Thoroughly spray all crevices on trees.

Painted Apple Moth.

See "The Fruit World," December 1st, 1927, p. 517.

The Lesser Case Moth.

These case moths are very numerous at present in orchards. They eat pieces out of Apples and other fruits. The lesser case moth favours sticks rather than leaves for the outer covering of its case, and there are generally one or two sticks longer than the rest, projecting a considerable distance beyond the case proper. Spray with arsenate of lead.

Orange Case Moth.

This case moth is very similar to the lesser case moth, except that the case is much larger, the female case being from five to six inches in length. From the native trees, Eucalypts and Acacias, it has become a pest of Citrus trees. At the present time they are numerous. Spray same as for lesser case moth.

Codlin Moth.

See "The Fruit World," February 1st, 1928.

Light-brown Apple Moth Caterpillars on Vines.

During the ripening of Grapes these small, active green caterpillars do a considerable amount of damage to the Grapes. A couple of caterpillars in a bunch of Grapes will practically destroy every Grape. Spray thoroughly with benzole emulsion, 1 lb. to 5 gallons of water. When Grapes are young, use arsenate of lead.

Cutworms on Apples.

The present season is a particularly bad one for cutworms in orchards. Keep a sharp lookout for these caterpillars, and spray with arsenical sprays. Keep ground well worked around trees, exposing the grubs to insectivorous birds.

Huebner's Case Moth.

The caterpillars of the bag or leaf case moths are at times a serious pest on Grape vines and Quince trees. This season they are particularly numerous on Apples and Quinces. The extraordinary numbers in which these insects appear may be gathered from the fact that a single branch of coastal tea-tree about 15 inches long, 75 cases were counted. Fortunately, they are easily destroyed with arsenate of lead.

Rutherglen Bug.

These destructive plant bugs are not quite so numerous as in past seasons. A fair number are still to be found in Peach orchards. Use phenyle spray, which is prepared as follows:—

1 quart phenyle
3 lbs. washing soda.
1 bar yellow soap.
40 gallons water.

The soap is shredded and dissolved in hot water, the other ingredients are added, and the mixture made up to 40 gallons.

Codlin Moth.

Pamphlets on life-history and treatment for Codlin Moth are obtainable free of cost on application to the Department of Agriculture, Melbourne.

CO-OPERATIVE MARKETING.

Big Increase in U.S.A.

Co-operative marketing is making big strides in U.S.A. Recent statistics show that 85 per cent. more farm products were marketed co-operatively in 1924 than in 1919. Co-operative marketing is applied to all classes of primary produce.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE." 499 LITTLE COLLINS ST. MELBOURNE.

Royal Agricultural Society of New South Wales.

ROYAL EASTER SHOW

Moore Park - - Sydney

2nd to 11th April, 1928

Nine Days - - - - - - - - - - Five Nights

£14,000 - - - - PRIZES - - - - £14,000

Attractive Fruit Schedule.

Special Classes for Export Apples and Dried Fruits.

Very Liberal Prize Money in All Fruit Classes.

ENTRIES CLOSE

FRUITS (including Orient Line Jubilee Export Apple Classes), 9th March.

Schedules and Entry Forms on Application.

Endeavour House, 33 Macquarie Place, SYDNEY.

G. C. SOMERVILLE, Secretary.

SPRAY-RESIDUE REMOVAL.

Hydrochloric Acid Bath Used in U.S.A.

As it is necessary to remove the arsenic spray residue on fruit in excess of .01 per cent. to fulfil British health regulations, it is of interest to know how American Apple and Pear growers are tackling the problem.

On the U.S.A. Pacific Coast—the boxed Apple producing section—more arsenate of lead is necessary to check the codlin moth than in the Eastern States, such as Virginia, New York, and Maine, where Apples for export are mainly supplied in barrels. Hence in the Pacific Coast States of California, Oregon and Washington, washing machines have been installed.

The Oregon Agricultural College, after making careful tests, have issued a statement as follows:—

"Of the many compounds tested for removing spray residue from fruit, none has proved to be superior to hydrochloric acid. From 89 to 99 per cent of the arsenic is removed, and better results are expected when washing devices are perfected. Hydrochloric acid also removes the lead in equal proportions as well as any traces of copper and lime.

"Hydrochloric acid has proved to be non-injurious to the fruit. It does not remove the wax or protective covering. The fruit does not lose weight, and no consistent differences can be detected which might indicate that the acid in any way affects the storage or dessert quality. In all cases the treated fruit presented a clear attractive appearance."

Commercial hydrochloric acid is comparatively cheap, and may be obtained from any dealer in heavy chemicals. It is usually called muriatic acid. Containers are labelled 20 degrees Baume, or about 32 per cent. of acid. To make a 1 per cent. solution, it is necessary to use approximately three gallons of the commercial product to 100 gallons of water.

There are two types of washing machines in operation. One provides for the spraying of the hydrochloric acid from above and below as the fruit passes the jets. The other keeps the fruit submerged in the acid bath by means of revolving paddles.

Drying is done by air blasts or by soft brushes as the fruit passes along to the sizing machines.

In washing the fruit to remove the spray residue, tests are being made to include a sterilising solution, as is now done with Oranges, to remove any fungus infection.

The washing of the fruit has in many cases proved of value in an unexpected way. Much fruit previously rejected as culls, has, on being washed, been found to be of satisfactory packing quality, and the costs of the machine have in such instances been recovered in one season. Individual packs are being done away with in favor of a centralised packing system.

IMPROVED SULPHATE OF AMMONIA.

Fruitgrowers who use sulphate of ammonia will welcome the recent improvement in the condition of this important nitrogenous fertiliser. Instead of the moist, lumpy sulphate of ammonia that was distributed in the past, a dry, free-running, and non-caking fertiliser is being produced. It contains no free sulphuric acid to attract atmospheric moisture, and will prove not only much easier to apply, but more economical also. Those who contemplate a March application of sulphate of ammonia to citrus trees will be able to obtain this "neutral" sulphate of ammonia, as ample stocks are available for the requirements of the Autumn season.

The sales of sulphate of ammonia last Spring exceeded the most liberal pre-season estimates laid down by the fertiliser trade, the actual consumption for the last six months of 1927 being almost double that of the whole of 1920 and 1921. While this increased demand for sulphate of ammonia probably testifies eloquently to the power of advertising, the good qualities of the fertiliser itself have undoubtedly been the principal factor in influencing sales. With so much being spoken of the value of nitrogen to all forms of agriculture and horticulture, sulphate of ammonia (an Australian product—the cheapest form of nitrogen on the Australian market for many years—and still the cheapest according to the latest Victorian registrations), was bound to secure an appreciable "hearing."

MARCH

S.	M.	T.	W.	T.	F.	S.
.....	.....	.....	.....	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NITROGEN—

the main factor in producing good crops of Citrus Fruit.

Official and private tests have proved that Nitrogen is the most important element of fertility in producing heavy yields of high-class Citrus Fruits. Of all forms of Nitrogen available to the citrus grower, SULPHATE OF AMMONIA is the cheapest to buy—and the most profitable to use. Citrus trees, to maintain a profitable standard of bearing, require two applications of Sulphate of Ammonia at least—one in March and another in October.

Ask about "neutral" Sulphate of Ammonia—it's dry, runs freely, and will not cake in the bag.

Sulphate of Ammonia literature gratis from

THE METROPOLITAN GAS COMPANY,
196 Flinders Street, Melbourne.

SA 5/28

OCTOBER

S.	M.	T.	W.	T.	F.	S.
.....	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	.....	.....	.....

Illustration shows Fordson Tractor at work with an eight-foot Combine Drill.

Start the seed right

THOROUGH cultivation of the soil, careful preparation of a good seed bed, and proper planting under ideal weather conditions, are essential to the satisfactory growth of any crop.

With the Fordson and the proper seeding machinery a perfect job of seeding can be done quickly and easily. The grain is sown in the ground at an even depth and properly covered.

Moreover, when weather conditions are not just ideal, the Fordson enables you to complete seeding operations in the shortest possible time.

Mr. Leo. A. Robins, of Wagga. N.S.W., writes:—

"It is just on twelve months since I took delivery of the Tractor, and I have been able to use it for almost every operation on the Farm, including pulling a 7 ft. Harvester, 10-disc Sundercut International 15-tyne Combine Drill, and have plowed up to nine and ten acres a day at a depth of 4½ in. This operation did not fully load the tractor.

"I have also pulled over 4 tons of Oats on the road. On the belt I have driven a Thresher without the slightest effort, and a 9½ in. Single Bagger Chaff Cutter, and a 9½ in. Elevator Chaff Cutter.

"I might add that it has not cost me 30/- for replacement parts since I have had the Tractor."

You can profit from experience of this progressive farmer. Ask your nearest Ford Dealer to demonstrate the Fordson Tractor on your own property. Ask him, too, about the easy terms of payment by which you can own your Fordson to-day.

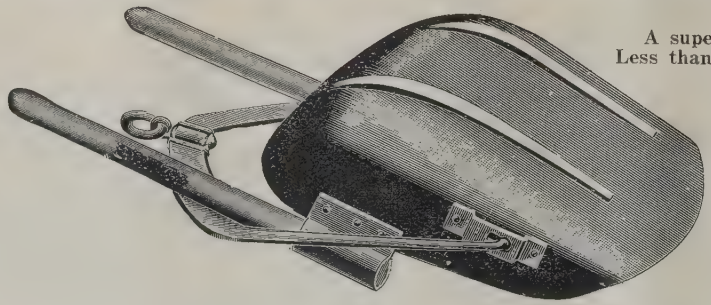
Fordson

THE UNIVERSAL TRACTOR

£195 Complete with Fenders and Pulley. F.O.B. Ford Works in this State.

FORD MOTOR COMPANY OF AUSTRALIA PTY. LTD. BRANCHES IN ALL STATES

"Macson" Scoops



A superior Scoop at
Less than Usual Prices.

For irrigation work, drains, channels, dams, roads, &c., these Earth Scoops are essential to quick work. The "Macson" Scoop enters ploughed or virgin soil readily, cuts it away quickly and cleanly, and is extremely light on the horse. The body is pressed COLD from a solid plate of hardened steel, thus avoiding the weak corners often found in hot-pressed plates. Fitted with steel runners and detachable handles. Built much stronger than necessary, and will last a lifetime.

PRICES:—3 cub. ft., 57/6; 5 cub. ft., 62/6; 7 cub. ft., 67/6; 10 cub. ft., 110/-.

McPherson's
Proprietary Limited

582 COLLINS ST., MELBOURNE;
51-65 BATHURST ST., SYDNEY;
116-130 WEYMOUTH ST., ADELAIDE.

Timm & Gerstenkorn

Fruit Auctioneers and Brokers

Fruchthof . HAMBURG . Germany

Established 1885

Tel.-Addr.: „Timmkorn Hamburg"

Special Catalogues showing prices issued after each sale

Account sales and cheques sent promptly after sale if desired cable remittance

Phone : F 4869

Vic. Rep. Consignments solicited * Advances if desired

BARKER, GREEN & PARKE PTY. LTD., 533 Collins St., Melb.

-LEMONS-

We are the largest Buyers in Australasia

C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vc.

Ship Your Oranges, Lemons, Grapes to New Zealand

All consignments for this market will have careful attention and realize highest prices if sent to

The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable "Peachbloom," Dunedin.

Take Advantage of the Two-Fold Action of "Black Leaf 40"

Kills by CONTACT and FUMES

While the effectiveness of "Black Leaf 40" in killing Aphis, Thrips, Woolly Aphis' and similar sucking insects is primarily dependent upon direct contact (wetting), a secondary advantage is furnished by the "gassing" effects of the penetrating nicotine fumes set free in the spraying material. This two-fold action helps definitely towards securing the highest percentage of efficiency—and is an advantage that is not possessed by any non-volatile spraying solution.

Also Assists Worm Control

At dilutions recommended for killing Aphis, "Black Leaf 40" kills the larvae of many "chewing" insects. Newly-hatched worms absorb the nicotine into their soft, tender bodies, and are very susceptible. By using stronger solutions of "Black Leaf 40" even more mature worms may be killed.

"Black Leaf 40" may be combined with standard orchard sprays, such as Lime-Sulphur, Bordeaux Mixture, Oil Sprays, Lead Arsenate, etc.

Tobacco By-Products & Chemical Corporation (INCORPORATED)

LOUISVILLE, KENTUCKY, U.S.A.

Sold by leading Dealers in Australia and New Zealand.

"Black Leaf 40"
40% Nicotine

KILL APHIS "Black Leaf 40" DUST-SPRAY

Spitalfields Market, LONDON

(Owned and controlled by the Corporation of the City of London)

Supplies a Population of 9,000,000

Nearest Market to

THE PORT OF LONDON
DOCKS AND WHARVES

with Railway connections to all parts of

THE UNITED KINGDOM

EXCEPTIONAL FACILITIES FOR
RAPID HANDLING
ALL CLASSES OF FRUIT AND VEGETABLES
HOME GROWN OR IMPORTED

— Extensions now in hand will make this the —

LARGEST FRUIT & VEGETABLE MARKET IN GREAT BRITAIN

BRITISH AND COLONIAL GROWERS CONSIGN TO
SPITALFIELDS MARKET

General Information can be obtained from:—
SUPERINTENDENT, SPITALFIELDS MARKET, LONDON, E.1.

Fruit For Great Britain

THE PORT OF HULL

is

Excellently Equipped for Rapid Handling of Fruit Cargoes
Nearly Seven Million Packages Imported during 1925
SALES HELD THROUGHOUT THE YEAR

QUICK DESPATCH

by the

London & North Eastern Railway

To All Parts of the Country

Further information gladly given on application to
MESSRS BURNS PHILP & CO. LTD., 84 William Street, Melbourne or Head Office, Sydney and Branches

We are offering the following New Varieties for the Coming Planting Season.

APPLE *"Lalla,"* a very highly colored Delicious which originated in our Lalla Orchard.

NEW BLACK CURRANT, *Daniel's Late,* two months later than any other variety, heavy cropper, large berries.

NEW RASPBERRY, *Lloyd George.* In R.H.S. tests, this variety was the leading one, strong grower, heavy bearer, large fruit of the highest quality. Every Fruitgrower should plant these.

Particulars Inquire **FRANK WALKER,** Nurseryman and Florist

110 Brisbane Street, Launceston

SALES DEPOTS.
No. 542-543 Covent Garden Market.
No. 97, 98, 101 Long Acre.
No. 1 Endell Street.

Cables—Spinach, London.
Codes—A.B.C., 5th Edition; Bentley's.
OFFICES.
97, 98 101 Long Acre.

FRUITGROWERS!

Consign your Fruit to

PASK, CORNISH & SMART

——COVENT GARDEN——
LONDON W.C. 2, England

THE PROGRESSIVE FIRM of FRUIT SALESMEN

Who receive consignments of **Apples, Pears, Oranges,** and **Grapes** all the year round, thus assuring a clientele of best buyers. Spacious Sale Rooms suitably situated to display fruit to very best advantage.

Reasonable advances made against Bills of Lading. Balances paid by cheques drawn on Australasian Banks.

Sales entirely by Private Treaty

Last year handled more than ONE MILLION Packages of English, Colonial and Foreign Fruits.

REPRESENTED AT

TASMANIA	SOUTH AFRICA	LAS PALMAS
WESTERN AUSTRALIA	NEW YORK	AZORES
	TENERIFFE	

And all Principal Fruit Growing Centres in England, France, Spain Belgium and Holland.

Tasmanian Representatives— **E. R. COTTIER & CO., A.M.P. Buildings, 88 Collins St., Hobart.**

Western Australia Representatives—
THOMAS HAYWOOD & SONS LIMITED, Bunbury, W.A.

REPRESENTATIVES REQUIRED in South Australia, Victoria and New Zealand.

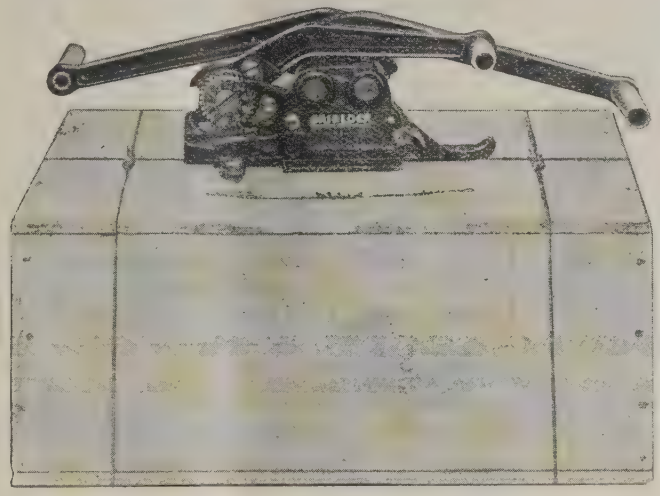
FOR BEST FRUIT PRICES —

WIRE-STRAP YOUR CASES

in the

LATEST AND MOST IMPROVED METHOD

The "GRIPLOCK"



The Griplock Improved Box Strapping Tool.

is the most efficient as well as the cheapest BOX STRAPPING method on the market.

IT IS THE ONLY TOOL WHICH OPERATES A HARD WIRE

Once GRIP-LOCKED the wire cannot be tampered with.

Full particulars from :— **Phone : J 2009**

GRIPLOCK—Safe Seal Systems, Waltham Place, Richmond, Vic.

Sole Australian Agents for
Root Dusting Mechanical
Appliances
(Patented)

Atomol Dusts Ltd.

Manufacturers of

DUSTING MATERIALS used as INSECTICIDES & FUNGICIDES ON PLANT LIFE

DUMPHRIES PLACE
off GILLES STREET
ADELAIDE

At this season of the year we desire to direct the attention of vegetable growers to **Atomol Vegetal Dust No. 1.** This dust is designed to control all diseases that attack the aerial part of vegetable plants. The material has been thoroughly tested, and it has been adopted as the standard method of treatment by many of our leading commercial growers.

This dust, which is highly recommended, is effective against the Cabbage Riddler and all chewing insects, Aphides and all sucking insects, as well as surface mildews and fungi.

For further particulars, apply to the under-mentioned interstate agents, or direct to the head office:—

SEND FOR OUR PAMPHLET, OR ENQUIRE THROUGH THE UNDERMENTIONED INTERSTATE AGENTS:—

VICTORIA:—
Irymple Packing Co., Irymple.
Irymple Packing Co., Merbein.
Sarnia Packing Co., Mildura.
Aurora Packing Co. Ltd., Red Cliffs.
Mr. G. W. Hall, Box 1, Bunyip.

NEW SOUTH WALES:—
Anderson & Co., George St., Sydney.

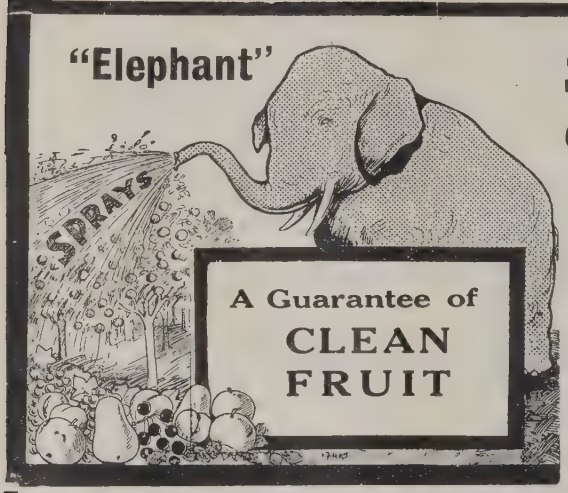
QUEENSLAND:—
Buzacotts' Queensland Limited, Brisbane.

WESTERN AUSTRALIA:—
Westralian Farmers' Union, 569 Wellington St., Perth.

TASMANIA:—
Charles Davis Ltd., 60 Elizabeth St., Hobart.

NEW ZEALAND:—
Harold Lightband Ltd., 79a Lichfield St., Christchurch.

THE ROOT HAND DUST GUN IS AN IDEAL MACHINE FOR THE APPLICATION OF CALCIUM CYANIDE OR CYANGAS.



STILL ON TOP!!

Orchardists Note This

The following Suspension Tests of

ARSENATE OF LEAD

over a period of six years show that "ELEPHANT" Brand still maintains First Place.

MADE IN AUSTRALIA
MADE BY AUSTRALIANS
MADE FOR AUSTRALIANS

Published in South Australian Journal of Agriculture, January, 1921.
Percentage of Arsenate of Lead remaining in SUSPENSION after.

Brand.	5 minutes.	15 minutes.	30 minutes
ELEPHANT PASTE	89.35	41.2	—
Bluebell	23.7	6.75	—
Vallo	39.7	12.1	—
Electro	22.85	6.2	—
Swifts	53.35	35.3	—

Published in the South Australian Journal of Agriculture, March, 1923.

ELEPHANT PASTE	52.4	43.0	36.7
Bluebell	11.2	6.3	4.1
Vallo	7.6	4.2	3.5
Electro	7.5	4.9	3.0
Swifts	36.4	28.0	16.6

Published in the South Australian Journal of Agriculture, 1926.

ELEPHANT PASTE	82.2	68.8	50.4
Bluebell	78.1	62.7	60.3
Vallo	Not published.		
Electro	13.0	6.0	3.2
Swifts	48.0	20.5	13.1

Published in the New South Wales Journal of Agriculture, December, 1927
Percentage of Arsenate of Lead SETTLED after.

ELEPHANT PASTE	48.72	69.20	81.44
Bluebell	72.56	79.36	89.76
Vallo	75.36	80.48	90.72
Electro	76.80	91.12	95.28
Swifts	68.0	78.48	80.56

"ELEPHANT" BRAND, ARSENATE of LEAD, PASTE also POWDER

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of **Elephant Brand Sprays**

Manufacturing Chemists, MADDEN GROVE, BURNLEY, MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

NEW SOUTH WALES—PRODUCERS' DISTRIBUTING SOCIETY LTD., Valentine & Quay Streets, SYDNEY.
QUEENSLAND—BUZACOTTS LTD., Adelaide Street, BRISBANE.
SOUTH AUSTRALIA—SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.
WESTERN AUSTRALIA—WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.
TASMANIA—R. NETTLEFOLD PTY., Hobart; BELL & GERRARD, Launceston; COCKER, BELL PTY., Devonport.
NEW ZEALAND—PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for April, 1928.

Illustrations.

Navel Orange, Riverside, California 135
Crab Apple Seedlings 138
Views of Shepparton, Vic. .. 143
Graph: 1926 Orange Prices 146
Planting Diagram 153
Pruning Fruit Trees 156
Public Market at Seattle (U.S.A.) 159

Contents.

Answer to Correspondents.. 140–1
Apples and Pears: British Imports 136
Apple of Content: "Granny Smith" 158–9
Beekeeping 167–8
Buds and Grafts .. .. .. xviii.
Citrus: Australian Oranges 135-6, 155-6
Cold Storage: Apples and Pears, Assoc. Reports .. 147–9
Dried Fruits Dept. 142
Editorial: Fruit Tree Stocks —Restrictions on Fruit Selling 140
Fruit Trees, Planting 153–5
Fruit Tree Stocks 137–9
Insect Pests, Control Methods .. .. xvii.
New South Wales: Seasonable Hints 144
New Zealand Notes 161
Notes in Brief 139
Nut Culture 157
Obituary 164
Orchard Fertility: Maintaining 165
Pears and Apples: British Imports 136
Personal 139
Planting Fruit Trees 153–5
Planting Citrus Trees 155–6
Poultry Notes 167
Queensland: Cultural Hints: Marketing 145–7, 159
Tasmania: Export News and Notes 150–1
Tomato: The Blushing 151
Victoria: Crop Reports: Shows, Shepparton; News and Notes 143, 162–4
West Australia 147
Wine, Australian 144

INDEX TO ADVERTISERS.

Books, Publications—

"Garden Lover," Bank House, Bank Place, Melbourne, p. xxi.

"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, p. xix.

Canning Machines—

Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. ix.

Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—

Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—

"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. xvii.

Dusting Machines—

Atomol Dusts Ltd., Dumphries Place, Adelaide, p. 131.

Fruit Buyers—

Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xii.

Fruit Tree Suppliers—

Brunning, John, and Sons, Somerville, p. 134.

C. A. Nobelius & Sons, Emerald, Vic., p. 154.

Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 152.

Two Bays Nurseries, Mooroodue, Vic., p. xxii.

Walker, Frank, 110 Brisbane Street, Launceston, Tas, p. 129.

Fruit Graders—

"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood Vic., p. 162.

"Ellis," D. Harvey, Whitehorse Road, Box Hill, p. xv.

Fruit Picking Bag—

The "Bay View," F. R. Mellor, 440 Elizabeth St., Melbourne, p. 164.

Irrigation Hose and Canvas Goods.—

Wyett Mfg. Co. Pty. Ltd., Geelong, Vic., p. 163.

Manures, Fertilisers, &c.—

Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. xvi.

Motor Cars and Trucks—

Ford Motor Co. of Aus. Pty. Ltd., all States, p. xi.

Orchard Ploughs, Cultivators, &c.—

D. Harvey, Box Hill, Melbourne, p. xv.

Orchard Requisites—

McPherson's Pty. Ltd., 582 Collins St., Melbourne, Vic., p. xii.

Patent Attorney.—

Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. 164.

Poultry—

Karswood Poultry Spice, Agents all States, p. 166.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—

Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xx.

Spray and Dusting Material—

"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. xiii.

"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.

"Elephant" Brand, Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. 132.

"Gargoyle' Spraying Oil, Vacuum Oil Co. Pty. Ltd., cover i.

"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.

"Clensel," Bruce Anderson, 56 Hardware St., Melbourne, p. xxi.

Dusting Powders, Atomol Dusts Ltd., Dumphries Place, Adelaide, p. 131.

"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. iv.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Sydney, p. 149.

Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. xxii.

"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 149.

"Volck," H. C. Pannifex & Co., 26 Market St., Melbourne, C.1, p. xix.

"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 148.

Spray Pumps and Guns—

Alumino-Thermic and Metal Sprayers Ltd., 247 George St., Sydney, N.S.W., p. iv.

"Bave-U" Power Sprayer, Russell & Co., Box Hill, p. xix.

604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. v.

Spray Pumps, etc., Cooper Pegler & Co. Ltd., 24d, Christopher St., London, E.C.2, p. 165.

Strawboard Liners for Cases—

J. Fielding & Co. Ltd., Chalmers St., Sydney, cover ii.

Strapping Fruit Cases—

Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.

"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. 131.

Stencilling Inks—

Caldwell's Pty. Ltd., Yarra Bank Rd., South Melbourne, p. 144.

Transport—

London and N. E. Railway, Burns, Philp & Co., agents, p. 129.

Tree and Stump Pullers—

Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix.

"Digger," Quick Manufacturing Co., 75 Pender St., Thornbury, p. xviii.

Fruit Trees

for 1928 Planting

APPLES	QUINCES	CHESTNUTS	OLIVES
PEARS	FIGS	GOOSEBERRIES	GUAVAS
PLUMS	CHERRIES	CURRANTS	BRAMBLES
PRUNES	WALNUTS	RASPBERRIES	LOQUATS
ALMONDS	ORANGES	NUTS	PERSIMMONS
APRICOTS	LEMONS	MEDLARS	VINES
PEACHES	MANDARINS	POMEGRANATES	STRAWBERRIES
NECTARINES	MULBERRIES	PASSIONS	RHUBARB
			LOGANBERRIES

All Leading Varieties from—

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 1866

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is **8/6.** All other places, **10/6,** post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices where copies and full particulars are obtainable) are as follows:—

HEAD OFFICE:

Bank House, Bank Place, Melbourne, Victoria

Representatives in all States and New Zealand.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

American Office: S. D. McFadden, Pacific Bldgs., Market Street, San Francisco, Cal., U.S.A.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

A MESSAGE OF CHEER.

Talk happiness. The world is sad enough
Without your woe. No path is wholly rough.
Look for the places that are smooth and clear,
And speak of them to rest the weary ear
Of earth; so hurt by one continuous strain
Of mortal discontent and grief and pain.

Talk faith. The world is better off without
Your uttered ignorance and morbid doubt—
If you have faith in God, or man, or self,
Say so; if not, push back upon the shelf
Of silence all your thoughts till faith shall come,
No one will grieve because your lips are dumb.

Talk health. The dreary, never-ending tale
Of mortal maladies is worn and stale;
You cannot charm, or interest, or please,
By harping on that minor chord, disease.
Say you are well, or all is well with you,
And God shall hear your words, and make them true.

—Ella Wheeler Wilcox.

Australian Oranges.

High Quality Appreciated in England. Possibilities of Export Trade.

Lessons from California.

(By R. E. Boardman.)

AS AUSTRALIA DEPENDS for her wealth on the export of her primary products, the fruit industry, among others, must be considered of importance. Over two and a half million bushels of Apples are now in process of being shipped for Great Britain and the Continent. The export of Oranges, however, has not yet developed to any considerable extent, mainly because of the difficulties of refrigeration during transport. It is imperative that this transport question be studied in view of the fact that Australia should normally be looking towards a great export trade in Oranges.

America has gone far in the matter of successful transport of fruit. We may take encouragement from the fact that California can succeed in shipping Oranges from Los Angeles and San Francisco to Great Britain and the Continent, via the Panama Canal, the voyage lasting from four to six weeks.

When our own stocks are exhausted in the Summer we regularly receive Californian supplies of Oranges and Lemons, this necessitating a voyage of from three to four weeks. On my recent voyage to San Francisco from Sydney, we had Sunkist Oranges all the way, the fruit having travelled from the United States to Australia and back again. Surely America has gone a long way in the solving of this problem of sending Oranges in refrigerated chambers.

A similar difficulty faced the early Australian exporters of Apples, and many losses were sustained before the right methods were discovered. We should certainly direct our energies to the discovery of conditions suitable for the successful export of our Oranges.

The area under Oranges in Australia is over 46,000 acres. The production for 1926 was 3,325,970 bushels. With an increasingly heavy crop as new areas are now coming into bearing, Australia is facing what is termed by some as over-production; by others, under-consumption. The fact is that a successful export market would be a boon both to Citrus growers and to the country as a whole.

California's Exporting System.

Last season California produced 37,556,000 bushels of Oranges, of which over 500,000 boxes (of 1 1-3 bushels) were exported to Great Britain and the Continent, and 200,000 boxes to the Orient, the Philippine and Hawaiian Islands. While in Los Angeles I witnessed the operations of the Sunkist organisation—a model co-operative concern with a turnover of £20,000,000 annually.

When picking the fruit the operators wear gloves to prevent finger-nail punctures. The Oranges are placed in what are termed "lug" boxes, and throughout the whole series of processes are handled as gently as eggs. The lug boxes are taken by motor lorries to the co-operative packing houses, where they go through a continuous process of washing in a borax bath (to sterilise against fungus spores), sorting to reject blemished specimens, grading for size, wrapping in attractive "Sunkist" papers, packing, nailing-up and delivery to the waiting railway waggon.

The fruit enters at, say, the east end of the building, and issues at the west end, ready for transport. This makes for a minimum of handling, a principle which, along with that of the most careful treatment, is strictly adhered to in every process, even to stowage in the ship's hold. To see to this a representative of the growers' organisation is constantly on duty.

At Riverside, California. Enclosed in iron railings is the original Washington Navel Orange imported from Bahia, Brazil, from which the Washington Navel industry of the world has sprung.

In transferring from the railway waggons to the ship's hold wooden trays, carrying about fifteen cases (not rope slings), are used. A system which is provided by some ships and which is more favoured is that of a spiral chute, by means of which the fruit is gently received into the hold, ready for stacking. The cleats on the packages provide for sufficient ventilation, and the temperatures in the ship's cold storage chambers range from 39 degrees to 41 degrees Fahrenheit. The ship's chambers vary in size, some up to 30,000 case capacity, but those holding from 6,000 to 8,000 cases are preferred.

The refrigeration system is that of cold air circulation as against the brine pipe system sometimes used for the purpose. I saw the "King Knute" loading 30,000 cases in Los Angeles for U.K. ports. The time of this voyage was from 28

to 30 days to the first English port, and to some of the Scandinavian ports often 53 days, which is considered to be too long.

I witnessed the whole of the operation from the arrival of the railway cars (which in warm weather are iced), and stood in the hold while the fruit was being stacked. The American stevedores appreciate the value of the growers' fruit, and exercise great care in stowage. These points could well be taken to heart in this country.

Scientific Research.

Scientific research has greatly benefited the American Orange industry. By means of bud selection the best strain of Washington Navel and Valencia Late Oranges are produced. Instead of crops maturing mainly in the Winter and Spring, science has transformed the last-named variety (also largely grown in Australia) into a midsummer ripener.

There is no working day throughout the year on which Californian Oranges are not exported from that State. The fruit which I saw loaded in June would thus reach England about the same time as that from Australia, and therefore it has to compete with Oranges from South Africa and Australia.

Later I heard many enquiries in England for our Oranges, but none were available, much to the regret of the trade, as the quality of the Australian Orange is greatly appreciated by the trade and the public.

If the Californians can successfully export Oranges with a journey of from four to six weeks, surely Australians can do likewise.

BRITISH IMPORTS OF APPLES AND PEARS In 1927.

U.S. Cool Storage Holdings.

THE REPORT of the Empire Marketing Board for 1st February, 1928, gives interesting figures in regard to the imports of Apples and Pears into Great Britain during the 1927 season. The following may be quoted:—

Apples.

Imports of Apples were over 2,000,000 cwts less in 1927 than in 1926, but were slightly in advance of those of 1925. The figures for 1926 were, of course, exceptionally large, owing to the combination of an unusually small crop in this country and a record commercial crop in the United States. Thus in the four months, September to December, 1926, total imports of Apples amounted to no less than 4,707,000 cwts., as compared with 3,044,000 cwts. in the same period in the preceding year, and 2,261,000 cwts. in the subsequent year.

Imports of Apples in each month from September to May in the past two seasons, together with figures up to the end of December for the current season, are given in the following table:—

Imports of Apples during each month, September-May, 1925-26 to 1927-28.

	Imports from Canada and U.S.A.			Imports from other countries.			Total Imports.		
	1925-26	1926-27	1927-28	1925-26	1926-27	1927-28	1925-26	1926-27	1927-28
	000 cwts.	000 cwts.	000 cwts.	000 cwts.	000 cwts.	000 cwts.	000 cwts.	000 cwts.	000 cwts.
September	355	361	297	37	125	48	392	486	345
October	753	1,400	455	121	209	111	874	1,609	566
November	881	1,479	698	76	62	57	957	1,541	755
December	740	946	569	83	25	26	823	971	595
January	563	673	—	9	9	—	572	682	—
February	525	844	—	8	7	—	533	851	—
March	524	753	—	19	2	—	543	755	—
April	310	410	—	219	96	—	529	506	—
May	7	175	—	439	275	—	446	450	—
Totals	4,658	7,041	2,019	1,011	810	242	5,669	7,851	2,261

The heavy imports from North America in the season 1926-7 continued right up to the Summer, and aggregate imports from Canada and the United States in the first six months of 1927 amounted to 2,918,000 cwts., an increase of nearly 1,000,000 cwts. over the imports from January to June in the preceding year. But 1927 imports from Australia and New Zealand were very much below the 1926 level, amounting to only 747,000 cwts. against about 1,567,000 cwts. in 1926, while imports from Canada and the United States in the last four months of the year were over 2,000,000 cwts. lighter than in 1926. Finally imports from the Continent in 1927 were lighter than in either 1925 or 1926, owing mainly to reduced imports from France.

All these circumstances combined to counteract the relatively heavy imports during the early months of the year and to bring the aggregate for 1927 to little more than that for 1925.

Pears.

Imports of pears in 1927, although lighter than 1926, were substantially greater than in 1925. Heavy quantities were imported from the United States and Canada in the season 1926-27, and, although these imports were maintained on a relatively large scale into the early months of 1927, imports from North America during the early part of the 1927-28 season (August to December, 1927) have been much lighter than in either of the preceding seasons.

The main reason for the increase in imports in 1926 over 1925 was, however, the larger arrivals from the Continent (France, Germany, Belgium and the Netherlands). None of these countries sent such large quantities in 1927 as in 1926, imports from the four countries referred to, in the period July to November, 1927, totalling about 730,000 cwts., as against 960,000 cwts. in the same period in 1926, and only 140,000 cwts. in 1925.

Neither Australia nor the Union of South Africa sent Pears in as large quantities last year as in 1926, but there was an appreciable increase in arrivals from New Zealand.

COOL STORAGE HOLDINGS OF APPLES IN U.S.A.

Cold storage holdings of Apples in the United States on December 1st and January 1st in the past two years have been as follows (the figures are given in terms of barrels, equal to three bushels):—

	1926-27.	1927-28.
1st December	10,487	7,811
1st January	9,360	6,807

It will thus be seen that there are considerably less quantities held in cold storage, to compete with Australasian exports, than in previous seasons.

Fruit Tree Stocks.

Seedling Stocks Versus Northern Spy for Apples.

Need for Scientific Investigation Into Stocks for All Kinds of Fruit Trees.

Mr. J. M. Ward's Views.

To the Editor, "Fruit World."

Sir,—Relative to the comments in the "Fruit World" of March 1, on pages 97 and 98.

The short paragraph referring to remarks made by myself at the meeting of the nurserymen, held in the office of the "Fruit World," on November 15, 1927, did not by any means convey the views expressed by me when addressing Victorian nurserymen, and under the circumstances I should be pleased if you would be good enough to publish that part of my address, dealing with fruit tree stocks, at the meeting of the Australian Association for the Advancement of Science, held in Hobart in January last (copy enclosed herewith).

The publication of this will place my official and private views before the fruitgrowers of Australia.

I would here like to refer to the illustration on page 97 ("Fruit World," 1/3/28)—"Three seedling Apple stocks—a mass of Woolly Aphis." I was informed by the nurseryman who raised these stocks that a certain fruit tree nurseryman near Melbourne visited him and asked to be given the very worst seedling stocks he had on the place, and after a search, those illustrated were procured. Really good seedling stocks were also offered, but were not accepted. No reason was given as to what use was to be made of the "blighty" stocks. The owner of the stocks in question, informed me yesterday (14/3/28) that, had he known what use they were to have been put to, the stocks would never have left the place, but would have been treated the same as others of a similar character, viz., burnt. He expressed his regret as to the unfairness of the whole business.

Then, again, it is evident that among stocks enjoying one commercial name, great variations occur, and it is highly desirable that selections of the best should be made, in an endeavor to reduce the great variation existing from tree to tree in most of our orchards.

We know that, so far as Apple tree stocks are concerned, the great majority of Apple trees planted in the mainland States are on the Northern Spy Stock, which has been vegetatively propagated, whereas in Tasmania the majority of the Apple trees are worked on seedling or "free" stocks.

Neither of these stocks is giving complete satisfaction. At the same time, most mainland growers and almost the whole of the fruit tree nurserymen, are satisfied with the stock used by the majority of nurserymen, i.e., the Northern Spy variety.

The Scarlet Nonpariel Apple (known as Scarlet Pearmain in Tasmania) appears to be a complete failure when worked upon the vegetatively raised Spy stock; the same thing applies to a lesser extent with Cleopatra and Sturmer Pippin, whereas these varieties, more especially Scarlet Nonpariel, have done very well upon the free stocks.

Although I have stated that a large number of growers and nurserymen appear to be satisfied with the Northern Spy stock, they have really not given the matter serious consideration, particularly in so far as the use of certain stocks for the various kinds of Apples, and the adaptability of stocks for different soil and climatic conditions are concerned.

Excellent work has been done and is being continued in connection with Apple tree stocks at East Malling Research Station, Kent, England. Similar work for our conditions is needed in Australia.

For some time past, Pear growers of Australia have had considerable trouble with Pear aphis (Eriosoma pyricola), which attacks the roots of Pear trees, and nurserymen are having great difficulty in finding suitable stocks resistant to the attacks of this insect, and yet suitable in other respects. The Pear variety, Pyrus calleryana, appears to be highly resistant to the pest in question, and promises to be a good stock for Pears generally. In writing upon Pear stocks (Bulletin No. 214, "Blight Resistance in Pears, and Characteristics of Pear Species and

I am enclosing an illustration of some Apple seedlings for publication, and thus readers can discriminate for themselves between the two illustrations.

As already stated, my address at the Science Congress places my views before the fruitgrowing public, and in fairness to all concerned I trust you will publish the foregoing remarks as well as my address upon the subject.

In conclusion, may I add that the expressions of opinion on this subject will not get us anywhere; it is real work upon the matter that counts, and not opinions.—Yours faithfully,

J. M. WARD,
Superintendent of Horticulture.

The portion of Mr. Ward's address before the Science Congress, to which reference is made, is as follows:—

Fruit Tree Stocks.

MOST VARIETIES OF TREE FRUITS have from very early times been worked on to root systems other than their own. Virgil emphasised the importance of choosing a suitable stock, and many writers since his time have dwelt on the influence which the stock undoubtedly exerts over the scion; and yet to-day we are still appallingly ignorant on this question.

The position is that each type of fruit is grown on a variety of stocks; and, though certain prejudices exist in favor of, or against particular stocks, their fundamental characteristics are still a matter of conjecture or opinion only. A systematic attack on this problem is long overdue.

Stocks"), Prof. F. C. Reimer, of Oregon Agricultural College, Oregon, states in regard to this variety:—

> "**Resistance to Woolly Aphis.**—One of the most important characteristics of P. calleryana, is its high degree of resistance to the Pear Woolly Aphis. This insect is a serious pest on French Pear stocks on the Pacific Coast. Among the many seedlings of the French Pear stock of various ages at this Station, it is difficult, during the later summer and early fall, to find any which are free from this aphis. Very often the French roots are literally covered with white masses of it. Under identical conditions, and often in adjoining rows, the roots of P. calleryana seedlings are entirely free from this insect. In thousands of seedlings which have been dug at this Station, these aphids are rarely found on P. calleryana, and in no case has there been a sufficient number on the roots to produce the slightest injury. In this respect P. calleryana appears to be superior to all other species in our collection."

In order to deal with the Pear root aphis in Victoria, investigation into Pear stocks is necessary.

At the same time, consideration should be given to the use of stocks resistant to the Pear blight (Bacillus anylovorous), and in this respect we could profit by the valuable work done by Reimer.

Investigations are also urgently needed in connection with stocks for stone and Citrus fruits.

In the Goulburn Valley, Victoria, for instance, some of the largest and most successful growers of Peaches and Apricots are of the considered opinion that the average commercial life of Peach and Apricot orchards, growing under irrigation, is only ten bearing years.

If this is borne out by actual fact—and there is no reason to doubt the statements of the growers in question—the difficulty may be overcome by the use of some other stock or stocks than those now in use. The Victorian Department of Agriculture, through their Viticulturist (Mr. F. de Castella), has done some excellent work in connection with the affinity of vine stocks and scions, the results of which will shortly be published; **similar good work on fruit tree stocks is long overdue, and further delay in commencing this very necessary work should not be tolerated.**

STOCKS FOR APPLE TREES.

The question of the most suitable stock for Apple trees is again in the forefront of discussion.

The valued tests at East Malling, Kent, England, as reported in previous issues of the "Fruit World," has set many growers thinking hard. In our last issue the need for a blight-proof stock for Apples was strongly emphasised.

Mr. P. Val. Kerr, of Tyabb, Victoria, who intensively studied fruitgrowing in California, Oregon and Washington after the war, writes as follows:—

"Regarding the report issued by Mr. W. Ranger, I entirely disagree with his theory that trees in U.S.A. are more vigorous than ours by reason of the stocks used (although I don't contend that the Northern Spy stock is ideal).

"My experience forced me to the conclusion that the planting of orchards in America is largely confined to the best class of soil, whereas our fruit trees are mostly planted in third-class soils, and this caused the difference in growth and production.

"To illustrate this, I offer two examples.

"In Victoria, trees planted in rich soils (like Bacchus Marsh) make growth and produce crops equivalent to the best Californian plantations. On the other hand, areas of poor land in America devoted to Apple culture produce trees similar to ours (instance Yucaipa Valley, California).

"If the stock is the cause, how would Mr. Ranger account for Pear trees in both countries exhibiting the same differences as Apples? Both countries propagate Pears on seedling stock, and probably raised from seed obtained from the same source (France). The same argument applies to stone fruits."

— —

Comments from South Australia.

Mr. H. N. Wicks, nurseryman and fruitgrower, gives his opinion thus:—

The question of fruit tree stocks is a vast one, which should be immediately taken up by Government experimental bodies in each State, as it is the keynote of successful fruitgrowing, and does not only apply to Apples, but needs investigation in connection with other lines as well, especially Pears.

The fact that different localities may demand different stocks according to soil conditions, precludes anything in the way of a general statement condemning the use of seedlings for stocks in certain States, or even in certain localities of certain States.

That the Spy is a proved stock of outstanding merits in quite a wide range of Apple producing country, does not for a moment prove that it is not quite unsuitable under certain conditions and environments, and for anyone who is not actually and practically familiar with the localities in question to state that growers are taking grave risks by using seedling Apple stocks in place of Spy, is, in my opinion taking grave risks of making the mistake of his life.

This question is of such magnitude that it is impossible for any individual to undertake the vast amount of work entailed, and in my opinion there is scope enough here to keep our experiment stations busy for many years, and thus perform a work which would be of inestimable value to fruitgrowers throughout the Commonwealth.

Crab Apple Seedlings raised by Mr. J. M. Ward.—Young Stocks grown from Apple Seed Planted the Same Day in the Same Row. The five on the left should be discarded, as they will produce "dud" trees in the future. The remaining four should produce strong and vigorous trees when worked. Note the splendid rooting system, although only eight months old. (See article on previous page.)

— —

A Tasmanian Opinion.

Mr. Frank Walker, nurseryman and fruitgrower, of Launceston, Tas., writes as follows under date March 16:—

"We note correspondence in your March issue on fruit tree stocks, and should like to express our views and experience on this subject.

"Some years age, when this matter was first published, I was a strong advocate for Spy stock and Spy stock only, and noted year by year, this matter became more keenly discussed amongst Tasmanian fruitgrowers, altogether in favor of the seedling stock.

"As nurserymen, we were bound to pay attention to this, and investigate, and we are convinced that for many varieties the seedling stock is the best, and the Spy is the best for some sorts.

"We have a fairly large orchard in two districts here, over 65 acres in full bearing, most of which are on Spy stock, we are still planting, but

now prefer to use the seedling stock for many sorts, we are sure, that in many cases the failure with the Spy stock is largely due to unsuitable soils and poor cultivation and feeding methods.

"During the last three and four years, the demand here is for trees on seedling stocks, many of the larger planters will not plant Spy on any account, and as nurserymen, we have to endeavor to grow what is in demand.

"The seedling certainly makes the bigger tree, it is rather longer coming into bearing, but produces more fruit per acre, the color of the red kinds is not so uniform on seedlings as on the Spy.

"The fear of aphis on the roots is more apparent than real, as seen by the crops carried by the established orchards on this stock, and there is a seedling stock in use that is absolutely blightproof, equally so as the Spy.

"The recently introduced natural enemy of the aphis Aphelinus mali, will, we believe banish this pest from Tasmanian orchards within a very few years, as it is doing excellent work here."

Mr. G. S. Jenkins, Kelso, N.S.W., writes:—"All the trees in my orchard are on Northern Spy stock, and I am perfectly satisfied; they are fair-sized trees, and very regular. Their crops have been of good average always, and this year I am expecting five bushels' average. The trees are 16 to 17 years old."

Personal.

Mr. A. S. Krcrouse, manager of Comino Bros., fruit merchants, Brisbane, visited Victoria, New South Wales, and Tasmania during March. He commented favourably on the quality of the fruit in the various orchards. Lemons received from E. N. Barton and Escott Bros., Kyabram, were of excellent quality. Such fruit realised up to 35/- a case. The Brisbane market could absorb large quantities of such fruit from November till February. If sufficient Australian supplies could be received there would be no need to import Lemons.

Brisbane was also a market for Pullar's Cling and other Peaches during the season. Problems of disease during railway transport had yet to be overcome.

We were pleased to see Mr. A. Yeates, of Millenden, Western Australia, the W.A. representative on the Australian Dried Fruits Board, who visited Melbourne early in March. Mr. Yeates reports a nice crop of Currants in Western Australia this year. We hope that the growers will have a profitable season.

Mr. George Williams has been appointed Director of Fruit Culture, Department of Agriculture and Stock, Queensland. Since the retirement of Mr. A. H. Benson from the position Mr. Williams has been Acting Director.

Mr. Williams is greatly esteemed for his wide knowledge and active sympathy with fruit producers, and this permanent appointment has given general satisfaction.

Waiter: "Did you have lentil or pea soup, sir?"
Customer: "Heaven knows! It tasted more like soap."
Waiter: "Ah! That would be lentil, sir. The pea soup tastes like paraffin."

NOTES IN BRIEF.

The difficulty of securing entry of Apple trees on Northern Spy stock into Queensland, is emphasised by a correspondent in this issue. It is thought that this action is retarding the Apple-growing industry of Stanthorpe, Q.

F. W. Vear

Fruit & Vegetable Salesman

Commission Agent

WESTERN MARKET
MELBOURNE, VIC.

Highest Market Rates Assured
Prompt Settlements

N.Z. Fruit Export Levy.—This season's levy under the Fruit Control Act has been fixed at 1½d. per case.

Mueller Research Medal.—The General Council of the Australasian Association for the Advancement of Science, at its meeting this year, awarded the Mueller Medal to Dr. L. Cockayne, F.R.S., of Wellington, N.Z., for his researches in New Zealand botany, extending over a period of 25 years.

Oranges are successfully shipped in cold storage from California, via the Panama Canal to England and the Continent, the journey taking from 28 to 45 days. The temperature is from 39 to 41 deg. Fahr. Why cannot Australian Oranges be sent for a cold storage voyage of similar length?

The Pecan Nut and the Australian native Macadamia Nut should be more largely planted. Walnuts can also be successfully grown, and large plantations should be established.

Dusting By Aeroplane.

Aeroplane dusting of fungicides and insecticides has proved successful in Canada on wheat and in U.S.A. and Canada on wheat, fruit trees, vines and vegetables.

The historical vine at Hampton Court Palace was bearing 550 bunches of grapes, averaging 1½lb. to 2lb. in weight, in August, says an English exchange. The fruit this year is said to be finer than ever.

HIGH COMMISSIONER VISITS LIVERPOOL.

On February 9 and 10, the High Commissioner for Australia, Sir Granville Ryrie, K.C.M.G., C.B., V.D., visited Liverpool. The days were crowded with visits, interviews, etc., and included an interview with migrants, and visits to the cathedral and docks. Sir Granville was very impressed with the facilities provided for vessels at the latter. Dinners were given in his honor by the Liverpool Engineering Society, the Liverpool Chamber of Commerce, and the Royal Colonial Institute. At a luncheon at the Exchange Station Hotel, he delivered a short speech on "Anglo-Australian Trade."

FRUIT TREE STOCKS.

THE articles in the last few issues of the "Fruit World" concerning fruit tree stocks have awakened much interest. Principal comment has centred so far round the question of Apple tree stocks and the relative values of Northern Spy and seedling stocks. In this issue the Victorian Superintendent of Horticulture (Mr. Ward) sets forth his views.

The heart of the matter is that there is urgent necessity for scientific investigation on the subject.

The whole question of stocks for all kinds of fruit trees needs to be examined, and practical experiments to be collated for Australian conditions.

Favourable references have been made to the research work of fruit tree stocks at East Malling, Kent, England. Their work on Apple tree stocks is classic, but it does not appear to be generally known that the East Malling Research Station has done equally fine work in other fruit tree stocks, and excellent work in plant pathology and entomology. It is to the credit of the English folk that this organisation was commenced by fruitgrowers, and supported by funds received direct from the industry. Later, when the quality of the work was appreciated, they were supported by Government grants to enlarge their opportunities.

Splendid work is also being done at Rothamstead and other places.

Scientific work of fruit tree stocks and bud selection is being efficiently carried out in many fruit-producing areas of the United States. Australian fruitgrowers need to become so seized with the importance of this subject that they will be able unitedly and effectively to co-operate with Government departments in establishing a similar research programme.

Much useful work is already being accomplished: several States already have their experimental orchards, but there is room for much increased activity.

With an enlarged vision as to the practical utility of this research work, and the will to carry it through, great benefits would accrue to this important primary industry.

DISASTER IN CALIFORNIA.

Owing to the bursting of a huge dam, there has been an appalling loss of life, several hundreds being killed: much damage was done to property. Our sympathy goes out to all who are bereaved. Cable advises state that this is the worst disaster in California since the San Francisco earthquake and fire.

Damage to orchards in the Santa Clara Valley is estimated at over £1,000,000.

RESTRICTIONS ON FRUIT SELLING.

THE two main markets for the sale of fruit in Australia are Sydney and Melbourne. At growers' conferences the subject of new markets is always received with enthusiasm—but what of our present markets? Hereunder we give a copy of a notice that is being prominently displayed in Melbourne suburban fruit shops:—

NOTICE TO THE PUBLIC.
Shops and Factories Act.
THIS SHOP MUST CLOSE
On Monday, Tuesday, Wednesday and Thursday
At 7 o'clock p.m.
in each week during the months of
May, June, July, August and September
of each year.
Friday and Saturday to remain open as usual.
This is gazetted and comes into force on 1st May.

The bulk of our fruit is sold in the suburbs, yet here is an instance when for five months in the year suburban fruit shops in Melbourne must compulsorily close at 7 o'clock four nights per week.

People are able to purchase lollies, but not health-giving fruit. These restrictions cause great annoyance to the general public, both residents and visitors, and great losses to the fruitgrowers.

Here on the one hand are growers with heavy crops which they desire to sell, and on the other hand is the public, who desires to purchase, but restrictive regulation makes the contact impossible.

These restrictions invaded the city of Melbourne proper for two years, with the result that it became a punishable offence to sell fruit in the day time in Melbourne by any shop that kept open as a cafe at night. Many shopkeepers were fined for the frightful offence of selling Oranges, Apples, and Bananas during the day time, coupled with the sale of cakes and tea in the evening.

The "Fruit World" and Mr. W. H. Everard, M.L.A., took the leadership in having such harassing and grotesque regulations removed.

The need for fruitgrowers to have an organisation to watch for matters of policy and general legislation has been constantly urged by us. We repeat our contentions—Fruitgrowers must watch these matters of policy.

In regard to the present suburban restrictions, new elements have entered since these were imposed. Suburban picture shows have surrounding them facilities for the purchase of sweets. But for five months—from May to September inclusive—no fruit is obtainable. Further, lolly shops must not stock fruit at all, even during the day time. For if such shops sold fruit during the day time, they would have to close their doors at 7 p.m., which, of course, would mean the loss of their evening trade in sweets.

This subject affects all the States—not simply Victoria—as fruit is sent from every State for sale in Melbourne. The fact must not be overlooked that Melbourne is growing rapidly. Tourists and residents are disappointed at the restrictions placed on the sale of healthful fruit.

There is only one way to correct the aforementioned anomaly, and to prevent further inroads on growers' liberty, and that is the formation of an organisation to watch these and other matters.

Answers to Correspondents

Ethylene Gas for Colouring Citrus Fruits.

O. C. Rath, Harvey, W.A., writes:—I think I was reading in your paper that the Americans have a gas that colours green Oranges and Lemons quickly. Can you tell me if this can now be obtained in Australia? I find your articles about citrus very interesting and very instructive.

Answer.—The material referred to is known as Ethylene Gas, and it may be obtained from the Australian Oxygen & Industrial Gases Co., of Latrobe-street, Melbourne. Articles have appeared from time to time in regard to the use of the gas, including one on p. 124, March issue, giving the results of experiments conducted by the Victorian Department of Agriculture, which indicate that under certain conditions the gas may be of great assistance to the citrus grower. It should be noted that the use of the gas is only likely to prove satisfactory when the fruit is mature, but has failed to colour properly owing to climatic or other conditions.

RUTHERGLEN BUG.

A correspondent, writing from Shepparton, says:—"Two growers at Shepparton East have discovered a new way to get at the Rutherglen fly.

"Having heard that the life of the fly was short, they sought its breeding places, and found that the main place was at the butt of the tree, where there was a space in the ground, caused by the swaying of the tree in the wind. When this earth was turned up, the flies came out in swarms, and if done on a cold day, they could not use their wings, and could be killed or burned. These growers found this way very successful, and will unhesitatingly use it again."

Answer (by C. French, Government Entomologist).—The insects are, no doubt, merely sheltering in the cracks about the butts of the tree, and I am afraid the few that may be killed by the methods advocated by your correspondent would hardly be worth while.

Beetle from Shepparton.—Mrs. E., Shepparton, sends specimen of beetle, and asks its name and habits.

Answer (by Victorian Government Entomologist): The beetle is one of the "Rose Chafers"—Diaphonia Bestii. The beetles frequent flowers, but do very little damage. This particular one is a rather rare species.

KING ISLAND MELILOTUS.

A correspondent writes:—"Last year, through reading of King Island Melilotus and Bokhara Clover for vineyard green manure, we planted up 16 acres, with a view to eating it off and fattening lambs. We planted it on swampy land, seepage from channels in the Mallee, and on a well-worked up vineyard of 16 acres. Not a bit came up anywhere. Had we put other cover crops in, we would have been better off in pocket."

Answer (by F. H. Brunning Pty. Ltd.).—We feel quite confident in saying that if your correspondent's purchase was made from any reputable firm in this city the germination of the seed should have been thoroughly satisfactory under normal conditions and providing it was properly treated; it seems to us that your correspondent is not aware that King Island Melilotus seed is covered with a waxy secretion, which must be removed before germination can take place, so that it is necessary either to soak the seed in boiling water for at least 12 hours prior to sowing, or to sow after a fire. Seed not treated in this manner will give little or no germination, and the removal of the waxy secretion either by boiling water or other heat is an essential preliminary to obtaining a successful stand of this plant.

It is worth while for all concerned to become acquainted with the peculiarities of this valuable plant.

THE EMPIRE'S PIPE.

Can Australia Equal S. Africa's Tobacco?

A big market for Australian tobacco—if it is good, exists in England. This is the opinion of Messrs. Peel and Dowson, who have pioneered the sale of Empire tobaccos in London.

MARGETSON
& CO. LTD.

Fruit Importers & Salesmen

30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL

Head Office—Covent Garden Market, London, W.C.

Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.

Shipping Nos.
431 and 432

A similar view is expressed by Messrs. Cohen, Weenen & Co., tobacco manufacturers, who, with the steady improvement in quality, have built up a large and growing sale of African tobacco.

The trouble with Australian tobacco at present is its grittiness and immaturity, but Messrs. Peel and Dowson believe this can be changed, for the immature leaf is the result of a weak plant and lack of care in its early stages of growth.

"We can sell large quantities of the tobacco, but at present, nine out of every ten lots is two-fifths green," said Peel and Dowson's representative.

In answer to an inquiry whether the present experiment in Bathurst, N.S.W., where seed beds are being covered with vitaglass, was likely to produce the desired maturity and eliminate the grittiness which in turn militates against a good aroma, the opinion was given that such an experiment would help to produce tobacco as good as any in the world.

The general opinion in the tobacco trade is that, with the preferential duty given to all Empire tobaccos, the Australian has a big pull over the American, providing the proper care can be taken in the early stages of growth. The climate and soil in Africa and Australia are as good, and in Australia such conditions are superior in some districts.

A horticulturist with experience in Australia was of the opinion that the vitaglass experiment should prove successful, and be a big aid to tobacco culture in Australia, as the sunlight and natural heat, as well as the atmosphere, had qualities that needed a certain refinement which could be secured by this new method.

"Wouldst Thou be Happy?"

Wouldst thou be wretched? 'Tis an easy way:
Think of but self and self alone all day:
Think of thy pain, thy grief, thy loss, thy care,
All that thou hast to do, or feel, or bear;
Think of thy good, thy pleasure, and thy gain,
Think only of thyself: 'Twill not be vain.

Wouldst thou be happy? Take an easy way:
Think of those around thee—live for them each day;
Think of their pain, their loss, their grief, their care;
All that they have to do, or feel, or bear;
Think of their pleasure, of their good, their gain;
Think of those around thee—it will not be vain.

Dried Fruit Department

N.S.W. DRIED FRUITS BOARD.

Export Quota for Sultanas. 25 per Cent. is Proposed.

THE second meeting of the N.S.W. Dried Fruits Board was held on March 5 and 6, in the Board Room of the Victorian Dried Fruits Board, Melbourne.

The main matter dealt with was the question of recommending to the Minister what proportion of the N.S.W. 1928 output of vine dried fruits is to be marketed outside the Commonwealth.

The question was the subject of a very lengthy discussion, and finally it was decided to recommend to the Minister that not less than 25 per cent. of the New South Wales 1928 output of dried Sultanas be marketed outside the Commonwealth.

The Board, whilst recognising that this export quota is considerably less than the quotas which are likely to be fixed by the Dried Fruits Boards of the other States, took into consideration the present position generally of growers on the Murrumbidgee Irrigation Areas, and this was the determining factor which influenced the Board in arriving at its decision.

The decision may be regarded as a step towards marketing control on the same basis as that adopted by the other States; in fact, the Board specially desires growers to realise that, having voted for the provisions of the Dried Fruits Act, the principle of which is marketing control, to be brought into full operation, they should now organise and be prepared for a considerably larger export quota in future years than that recommended for Sultanas this year.

The matter of an export quota for Currants and Lexias will be considered by the Board at a later date.

NEW USES FOR PRUNES.

As a result of investigations conducted in the Fruits Products Laboratory of the University of California, several new and important Prune products have been discovered. The most important of these is a canned Prune puree or pulp free of pits and of about the consistency of Apple butter (states the "Western Canner and Packer"). This product has been prepared commercially in canneries by E. Mrak, assistant in fruit products, and numerous tests have demonstrated its suitability for use in ice-cream, in "open face" Prune pies, in confectionery, and in various desserts. A Prune malt or milk shake with the pulp has proved very popular in a Berkeley soda fountain. The new drink is not only delicious in flavour, but contains the healthful qualities of a milk drink and those of Prunes.

Several new styles of canned ready-to-serve Prunes have been developed and improvements in Prune canning methods discovered. The investigations have been conducted in co-operation with the California Prune and Apricot Growers' Association, which has furnished the fruit and much of the funds for the investigations. The purpose of the work is to develop new markets for the rapidly increasing output of Prunes in California.

HAMBURG
(GERMANY).

Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

ALL SECTIONS UNITE IN DRIED FRUIT MARKETING.

From Adelaide comes the news that the Secretary of the Dried Fruits Board (Mr. W. N. Twiss) stated recently that as a result of negotiations between the representatives of the dried fruit dealers and the board, the dealers had decided to co-operate with the board in its administration of the Dried Fruit Act. The dealers had agreed to give an undertaking that they would observe the board's determination in respect to the home and export quotas. The terms of the agreement provided that the dealers would notify those growers from whom they had agreed to purchase dried fruit that they would take over the growers' liabilities in respect to the export proportion of the crop.

The signatories to the undertaking had authorised the board to publish for the information of growers the terms of the undertaking, and the names of the subscribing dealers, together with the names and addresses and full particulars regarding any dealers who might subsequently fail to honour the undertaking.

The board had informed the dealers concerned that it would enforce the penalties provided in the Act for any breach of the determination against any grower who sold to a dealer who was not a party to the arrangement.

The board had promised that it would confer with the boards of the other States forthwith with a view to an early announcement of the Australian quota, but that notwithstanding this arrangement, the local board reserved all its rights to exercise those powers conferred upon it by the Dried Fruits Act. The dealers concerned had given an assurance that they would faithfully and honourably observe the terms of the undertaking, although they might not be enforceable at law.

DRIED FRUITS PRODUCTION, 1928.

Estimated at 30,000 Tons.

A preliminary estimate of the crop of dried vine fruits in Australia this year is placed at 30,000 tons, being considerably less than the crop of 55,000 tons last year. This is largely owing to the considerable damage done by frosts in the Murray Valley.

Victoria.

The Goulburn Valley. Visited by "Fruit World" Representative.

AFTER visiting Shepparton and other places in the Goulburn Valley recently, our representative, Mr. C. Gorrie, states that many growers consider one solution of the marketing problem for Elberta Peaches has been found in the organisation of fruit trains. Three fruit trains have been conducted by the Committee of the Shepparton Irrigators' Association this year, but only the first—on which ice-trucks were used, can be considered successful.

Several years ago, Messrs. A. E. Bailey, T. C. James, and E. W. Beckham started to send trucks of fruit on different country lines, and now that they have formed a connection, they are getting reasonable prices for their fruit, without further glutting of the market.

The total consignment on one train in the middle of February was about 3,000 cases—these consisted mainly of Peaches—and the average price expected was 8/- per case. Mr. Bailey suggests that if the orchardists organised into small groups, and each group supplied one country line with fruit—mainly Elberta Peaches and Pears—the markets at Melbourne and Sydney would be in a more stable condition than they are during years of normal or heavy fruit crops.

Mr. Gorrie also made inquiries from the leading orchardists regarding the varieties of fruit trees found to be most successful in the district, together with the manures and sprays used on them. The reports seem to establish the necessity for three sprayings for codlin moth; one considered four were necessary.

Only in a few instances was smoking found to be completely successful against the Rutherglen bug, a spraying of phenyle was found to produce good results. A few of the reports are printed here; others will follow later.

Mr. F. Parker, of Lemnos, had 25 acres under cultivation, and the varieties found most satisfactory were:—**Apricots:** Newcastle, Mansfield Seedling, St. Ambrose. **Peaches:** Mayflower, Hale, Nicholls, Goodman's, Pullars. **Pears:** William. Also vines, Prunes and Japanese Plums.

As the orchard is only seven years old, the manuring consisted only of 1lb. of bonedust and 1lb. of superphosphates per tree. Two sprayings of arsenate of lead were used against the codlin moth. The Rutherglen bug was bad, and, though smoking was tried, the results were not satisfactory.

Mr. S. McCallum, of Lemnos, had 30 acres under cultivation. In his list of Peaches he put Golden Queen instead of Mayflower, and Pelora in place of Nicholls. Apricots included Shipley and Blenheim. Citrus fruits were grown successfully, and included Lemons, Navel Oranges, and Valencia Late.

Mr. McCallum considers 1lb. of sulphate of ammonia and 3lb. of superphosphate per tree a satisfactory manure. In future he will give three sprayings of arsenate of lead for the codlin. A spraying of phenyle was found to give good results against Rutherglen bug.

Mr. J. S. Orchard, of Grahamvale, had practically the same varieties of fruits. For manuring he used 6lb. to the tree, consisting of even parts of sulphate of ammonia and superphosphate.

The Looper caterpillar is bad this year, as was the Rutherglen bug last year. Smoking in the latter case gave satisfactory results.

Mr. A. E. Bailey, of Shepparton East, had 51 acres under Peaches, Apricots and Pears. His Apricots consisted entirely of Moorpark, while the Pears were:—Williams, Packhams, and Josephines.

For codlin moth, three sprayings of arsenate of lead were given, but he considers four are necessary. Mr. Bailey found that smoking shifted the Rutherglen bug.

Mr. A. V. Ballinger, of Orrvale, had 35 acres under Peaches, Apricots, Pears, Prunes, citrus. He added Elberta to the list of Peaches already given. Three sprayings for the codlin are considered necessary, and for a manure superphosphate and sulphate of ammonia were used.

Mr. A. F. Ballinger has 20 acres at Orrvale under Peaches, Apricots, Pears and vines. The only varieties changed were in the Apricots, he planting Tilton and Shipleys.

Two sprayings of arsenate of lead were given for the codlin, but Mr. Ballinger considers three would be more beneficial.

Top Left: In Mr. Fairley's "Fruit Vale" Orchard.—Pear tree, oil-sprayed, bearing prolific crop; Mr. C. Gorrie and Mr. W. Murray. Right: Mr. W. McGregor's citrus grove at Shepparton. Bottom; left: Cool Store for 30,000 cases, at Shepparton Fruit Preserving Co.'s Cannery. Right: Excellent citrus trees in Mr. Fairley's orchard.

New South Wales.

PRACTICAL SEASONABLE HINTS.

Picking and Packing.—Pick your fruit carefully, do not drop it roughly into the picking bags. This affects the keeping quality of the fruit. Pack firmly, but neither too tightly nor too loosely.

If packing for a local market, wrap the fruit, finishing the wrap over the stem, and pack the case full. When packing for export, allow for shrinkage by a slight bulge on top and bottom. To do this, use cases with flexible tops and bottoms. If you make your own cases, see that you use nails of sufficient length. It is also advisable to soak cleats before use, thus preventing splitting.

Citrus Harvest.—Early Citrus varieties will soon be being harvested. See

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

that everything is ready, and the picking boxes thoroughly clean and unable to puncture the fruit. Growers would be advised to instal a sizing machine, they are far more accurate, considerably quicker, and much more economical, than hand sizing.

Codlin Moth. — Destroy infested fruit now to assist in codlin moth control, as the carry-over grubs start next season's infestation. Destroy the fruit by boiling or burning, at short intervals.

Woolly Aphis.—When the trees are infested with this disease, give a good spraying with nicotine extract, or tobacco wash. To apply as mist is time and money wasted, as plenty of force is necessary to dislodge the pest.

AUSTRALIAN WINE.

Reduction of Bounty.

Importers of Australian wine in London are perturbed by the Commonwealth Government's proposal to reduce the export bounty from 1/9 to 1/-. They state that such a step will have a very bad effect on the Australian wine industry. Australian Grape growers do not feel at all optimistic as to the result of such a step, and have arranged a deputation to Mr. Bruce.

Minister's Explanation.

The Minister of Markets and Migration said he could see no cause for anxiety. When the previous reduction was made from 4/- to 1/9 in March last year, the Government held itself free to make any further alteration in the event of the British Government increasing its preference to Australian wines. Soon after that, the British Government did increase the preference from 2/- to 4/- a gallon. The Commonwealth Government did not immediately reduce its bounty; it waited to see that the Australian wines got the benefit of the increased British preference. Now it had decided to reduce the bounty to 1/-, but the drawback of the excise duty of 1/3 a gallon on fortified spirit used in the wine would be continued. The position, therefore, was that the total payment on export wine would be 2/3 a gallon, instead of 4/- a gallon, which was the original amount of the bounty, apart from the increase of 2/- a gallon in the British preference.

FRUITGROWING AND MARKETING IN U.S.A. AND ENGLAND.

Lecture by Mr. R. E. Boardman.

Before a large audience in the Tyabb Hall, Mr. H. J. Willoughby presiding, Mr. R. E. Boardman, editor of the "Fruit World," gave an interesting address on March 8th. Mr. Boardman detailed cultural conditions, organisation and marketing in the United States, and marketing in England. Appreciation was expressed regarding the co-operative organisations of growers on the U.S. Pacific Coast. The Associations worked in harmony with the trade and with the public. Scientific research had helped to reduce production costs and to increase the crops per tree and per acre.

Marketing systems in London, Liverpool, Manchester, Hull and Newcastle-on-Tyne were described. The recent improvements in Australian fruit packing were appreciated in England. The sending of long lines of district packs was preferred to small consignments from individual growers.

A hearty vote of thanks was accorded the lecturer at the instance of Cr. Hutchinson.

Orchard Spraying Industry.—The work on spraying and dusting of Apples for the control of Apple Black Spot was continued on a larger scale during 1927, reports the Agricultural College of Pennsylvania, U.S.A.

After two years, during which little progress was made because of the almost total absence of black spot in the college orchards, the 1927 plots promise some interesting results.

Several new dust mixtures are being tested for the first time, including both copper dusts and sulphur dusts.

Arrangements to secure data on insect control as well as black spot, have extended the scope of the project.

Brand Your
Fruit Cases and Bags
with
CALDWELL'S
STENCILLING
INK
(In Cakes and Liquid)
QUALITY UNSURPASSED
Obtainable All Merchants
Local Agents Wanted
CALDWELL'S PTY. LTD.
Yarra Bank Road
South Melbourne, Vic.

GROWERS SHOULD KEEP TREE RECORDS.

Remove Unprofitable Trees.

It is desirable that growers be able to form some idea as to which of their trees bear above and below the average.

The amount produced per acre depends entirely on the amount produced per tree. Therefore, to obtain a high productivity per acre, trees that bear below the average should be suitably treated, and if this is ineffective they should be removed.

The grower will find that with a little practice, he can form a reasonably accurate estimate of his tree crop.

ALL ORCHARDS, VINEYARDS, and plantations not thoroughly clean should receive immediate attention, as from now till the next rainy season the ground must be kept in a thorough state of tilth and free from weeds in order, in the first place, to retain moisture in the soil, and, in the second, to enable birds, ants, and predaceous insects to get at and destroy the pupae of fruit flies and other pests harbouring in the soil.

Preparing for Planting.—Land to be planted with trees should be got ready now, as it is always advisable —if at all possible—to allow newly-cleared land to sweeten before planting.

Scrub land intended for Bananas can be cleared now, as there will be little more growth, and it will have ample time to dry off properly in time for an early spring burn. Do not rush scrub falling (states the Department of Agriculture), as it is work that pays for extra care. Lopping will improve prospects of a successful fire.

Green Manuring.—When the orchard soil is deficient in organic matter (humus) and nitrogen, try the effect of green-crop manuring, planting the grey or partridge Pea, and manuring the ground for this crop with a good dressing of finely-ground island phosphate or basic phosphate.

Draining.—Go over all surface and cut-off drains and put them in good order. Also, if during the heavy rains, soft or boggy spots have made their appearance in the orchard, do what draining is necessary, as badly-drained land is not profitable orchard land, and the sooner it is drained the better for the trees growing upon it. After draining, the ground should be limed. Lime can be applied now and during the coming three months.

Picking.—Remember the extreme care that is necessary in the picking of citrus fruits, so as to keep the skin free from bruises and punctures. This advice applies equally to Custard Apples, Pineapples, Bananas, and other fruits.

Queensland

Cultural Hints : : Marketing

QUEENSLAND'S "COMPULSORY" CO-OPERATION.

Grower Says it is "Economic Fever."

Some Interesting Figures.

The Editor, "Fruit World."

Sir,—As the question of applying "compulsory" co-operation seems to be cropping up again, perhaps the following very illuminating figures may serve as a cooling draft for this form of economic fever!

The figures are taken from the three statements issued by the Committee of Direction since its inception, and the C.O.D. foundation is compulsion:—

	Total income.	Expenditure.	Balance.	Profits.	Fixed deposits.	Reserves.
1925 ..	£32,549 (18 mos.)	£23,238	£9,311	£9,311	£2,000	—
1926 ..	19,187 (12 mos.)	13,344	5,843	5,843	2,000	17,332
1927 ..	17,919 (12 mos.)	10,636	7,245	7,245	11,000	24,839
Totals ..	£69,655	£47,218	£22,399	£22,399	£11,000	£24,839

Banana section reserve alone, £14,767/15/9.

All other sections combined, £10,071/4/3.

Sources of Income.

Railway freight over charge £60,828
*All other sources 8,827

*Licence fees, commissions, and trading profits, etc.

The C.O.D. is financed by charging growers ordinary rates, but paying bulk rates, net a difference of probably 40 per cent., all of which naturally comes out of the growers' pockets.

	Salaries.	Rent.	Law costs.	Travelling.	Depreciation	Bad debts.
1925 (18 mos.) ..	£7,548	£835	£3,265	£423	£941	£50
1926	5,002	761	70	254	400	55
*1927	3,221	965	61	123	568	500
	£15,771	£2,561	£3,396	£800	£1,909	

*This item, "salaries," was questioned by most local associations, as, after deducting the manager's, sub-manager's and accountant's salaries, the remainder appears wholly inadequate to pay the "army" employed. Most of the salaries other than "Brisbane" are charged against the various sections. Thus:—

Banana Branch, 1925.

Commission on sale green floor, £5,436; less salaries, £1,782/5/11; rent, £643/11/6; expenses, £380/6/-; claims, £40; ripening, £1,930. Total, £4,776/17/5. Profit, £659/9/11.

As illustrating the loss of popularity of the C.O.D., the figures for 1926 were:—Commission, £2,922/7/2; wages and expenses, £2,282/6/5; and for 1927: — Commission, £2,033/16/5; wages and expenses, £1,375/9/8.

Benefits derived by contributing fruitgrowers—nil, unless a sickening of the very word co-operation is any "benefit." Yours,

HOE HANDLE.

Queensland, 3/3/28.

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

TO INCREASE FRUIT CONSUMPTION.

(To the Editor, "Fruit World.")

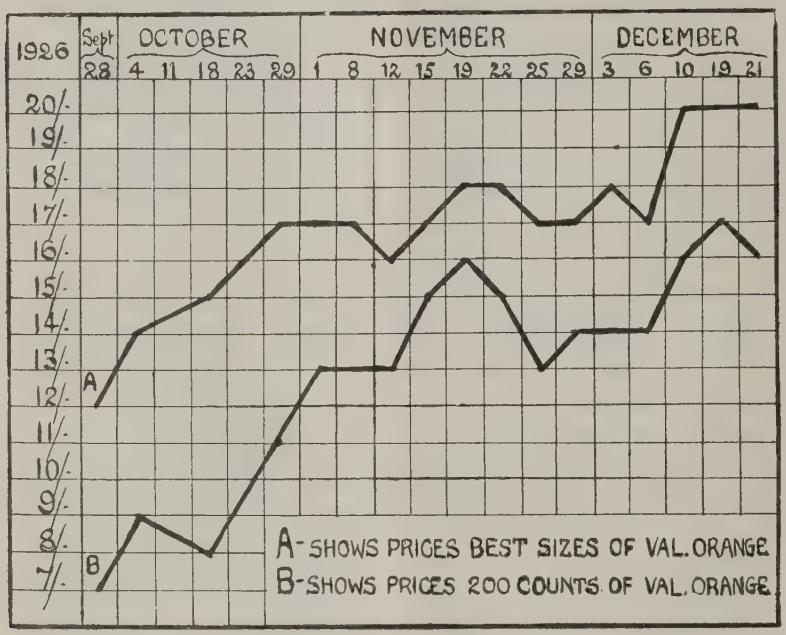
Dear Sir,—

In connection with your article headed "Heavy Fruit Crops," published in your March issue; we concur with your main point, and fully agree that the desired increase in consumption of fruit is a matter for the trade itself.

During the N.S.W. Valencia Orange season of 1926, there was an undue proportion of the crop which was small in size. The Queensland Valencia Oranges finish about the end of September, just as the N.S.W. crop starts to be marketed. Owing to climatic conditions chiefly, the fruit of both States was very much smaller than was usual, and much smaller than the public liked. So serious did this trouble of the small Oranges become, that about the middle of October, an Orange which counted 140 to the case, was worth 15/-, with a ready sale, and one counting 200 was only worth between 8/- and 9/-, and was very hard to sell at that. This firm was particularly concerned in this matter, and, in an effort to improve the demand for these small Oranges, undertook a small publicity campaign on its own initiative.

We wrote a short article on the value of small Oranges (copy of which is enclosed) and sent it, together with a covering letter to every newspaper in Queensland, both metropolitan and country. We are enclosing a copy of this letter for your perusal. You will note that the date of this correspondence is September 24, 1926, at which time we were seriously troubled with the small fruit.

The publication of the article which we submitted to the newspapers, took place early in October, and whether it was directly due to the result of our publicity or to some other cause, we are not prepared to state definitely, but the fact remains that there was a sharp rise in the value of small Oranges from the middle of October.



We are enclosing copy of a graph for the 1926 season, covering New South Wales Valencias on the Brisbane market, and showing the comparative values of the best sized Oranges and the small or 200 counts.

This tends to show the possibilities that lie before the fruit trade if it does seriously assume what is really one of its natural responsibilities, namely the cultivation of a proper demand for the commodity which it has to ofler.

A figurative illustration of the adage that "an Apple a day keeps the doctor away" can be worked out as follows:—

Putting the population of the Commonwealth down at a round 6,000,000 (that is the approximate number to whom fruit is readily accessible), every time the Commonwealth population eats an Apple, some 40,000 cases are used. If we induce the people of Australia to eat an Apple every other day, say three per week, the home markets of the Commonwealth would consume 120,000 cases, which is approximately 6,000,000 bushels per annum. Keeping in mind the times of the year that Apples in large quantities are not available, it is very patent that the trouble in the fruit industry is not Over-production but Under-consumption.

We hope that some definite result of your suggestion, namely that action should be taken to increase the consumption of fruit, be brought about, for if the fruit trade will not help itself, it cannot expect help from anybody else.—Yours faithfully,

HEDLEY GEEVES,
per Henry Spanjer.

Here is a copy of the letter published in Queensland newspapers, referred to by our corespondent:—

ORANGES.

The Value of Small Sizes.

There is an unaccountable desire on the part of the purchasing public for large-sized fruit. This fact is noticeable in all the chief markets of the Commonwealth. In recent years this demand for the larger sizes and the corresponding neglect of the smaller has become most marked. One result has been that values have assumed a new relation, and whereas there used to be very little difference in market prices as between small and medium sizes, there is now a considerable disparity between the prices paid by the retailer for say small Oranges as compared with large sized.

It is certainly a fact that the small fruit is in every respect as good as the large. The opinion has been expressed that in small Oranges the

BRISBANE

R. B. BOLTON & Co.
ALBERT HOUSE,
BRISBANE.

Brokers and Selling Agents for

FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

We sell to wholesale Distributors only, and do not handle growers' consignments.

We act as Railway Freight Agents for growers' joint truck loadings, and secure lowest freight rates.

On Forward Sales of fresh fruit we act for sellers and collect cash in exchange for delivery order.

health-giving qualities are more concentrated than is the case with the larger fruit. Since the smaller fruit is purchasable at a much more reasonable figure it is quite evident that the small Orange is a better proposition for the housewife.

The value of Oranges to children is too well known to need repetition. There is no finer medicine than the regular consumption of good quality Oranges. Size is comparatively unimportant, and small Oranges eaten every day are of much greater benefit to the health of a child or adult than is the irregular consumption of large Oranges.

This year, during the spring and early summer, first quality Oranges will be available, but owing to the droughty conditions which have prevailed, much of the fruit will be of smaller size than is usual. These small Oranges will be purchaseable at very reasonable figures, and if the housewife asks the storekeeper for them, he will soon obtain the necessary supplies. It will therefore be a good thing to resolve that the kiddies shall have Oranges regularly this year, even if they are smaller than last year, and, after all, a child does not need a big Orange, a small one is quite sufficient.

WESTERN AUSTRALIA.

Cultural Work for April.

Now is the time to apply fertilisers to the orchard. If the trees are bearing well the fertilisers should not be stinted. For the average soil of an orchard in full bearing, Mr. G. Wickens, Superintendent of Horticulture, recommends a dressing consisting of six cwt. superphosphate, two cwt. of muriate of potash per acre, with one and a-half bushels of Peas sown in April and ploughed under in spring.

If you intend **planting new orchards**, this month should see the ground thoroughly prepared. Plough to a depth of 10 inches or a foot and remove all roots of native trees.

If **brown rot** is troubling your Citrus trees, give a generous spraying to the trees and also the ground under them with either a Bordeaux or Burgundy mixture, using four pounds freshly-burned lime, 50 gallons of water, or four pounds blue stone, six pounds washing soda, 50 gallons of water.

When this disease is scattered throughout the orchard, it is as well to treat all the orchard, not confining the spraying to infected trees only.

While talking of Citrus fruits, remember that only fruit with a skin perfectly free from punctures, etc., should be packed for export, as otherwise blue fungus and other troubles will develop.

The fruit-fly is still troublesome, so baiting should still continue, and all infested fruit carefully destroyed.

Apples and Pears in Cold Storage.

Valuable Scientific Investigations.

Maturity at Picking and Use of Oiled Wrappers.

(By R. Sutherland, Engineer, Orchardists' Cool Store, Doncaster).

A paper read at the Annual Conference of Fruitgrowers' Cool Stores of Victoria at Box Hill on January 10, 1928:—

AS we are on the eve of a record season as far as the quantity of Apples and Pears are concerned, and many cool storage problems confront us, extracts from scientific investigations into two of our serious storage troubles will be of interest, viz.:—

"Core Breakdown in Pears May be Avoided," by H. Hartman (Associate Professor of Pomology, Oregon Agricultural College.

To the investigator of plant diseases the physiological troubles of fruits present a unique and baffling problem. In spite of much careful research by qualified workers, not a great deal has come to light concerning this group of abnormalities. It is true that the nature of one or two disorders are now pretty well understood, but such functional troubles as Bitter Pit, Pear Scald, Jonathan Spot and others must still be classed in the category of unsolved difficulties.

Nature of Core Breakdown.—As the name implies, core breakdown is essentially a disease affecting the core area of pears. It is generally a storage trouble, making its appearance as the fruit approaches prime eating condition. In very severe cases, however, it may be found in fruits that are still firm and green on the outside. Affected specimens occasionally are found in fruits still attached to the tree. The disease may be confined to the region of the seed cavity, or it may extend to the entire core and surrounding portions of the fleshy part. In its incipient form, the disease is characterised by a soft and watery condition of the affected tissue. Later, this is accompanied by a brownish or black discoloration and a foul odour is generally present during the final stages. In severe cases, rapid breakdown of the entire fruit occurs.

Thus far it has not been possible to attribute core breakdown to the work of a living organism. Apparently, it is a physiological trouble.

Although core breakdown seems to be more serious in some localities than in others, the trouble is more or less common to all Pear regions, no district where Pears are raised is known to be entirely free from it.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

COVENT GARDEN, LONDON
Ridley, Houlding & CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.,
Best market prices and prompt account sales returned.
Correspondence Invited.
Representative in Victoria
THE International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

As already indicated, core breakdown usually makes its appearance as the fruit approaches prime condition. The average grower, therefore, rarely sees the effect of the disease, and does not realise its importance.

Scope of Investigations.—Casual observations have suggested that the degree of maturity which the fruit has attained when picked, exerts considerable influence upon the development of core breakdown, and that perhaps this trouble can be controlled by harvesting at the proper time. Even though this be true, however, considerable specific information is necessary before recommendations can be made. The range of susceptibility for the different varieties must be ascertained, the effects of the time of picking on the dessert and keeping quality must be known, and a method of determining maturity must be perfected.

Information relating to these phases was furnished by the experiments on Pear harvesting and storage which

ORCHARDISTS!

TO OBTAIN THE BEST RESULTS

Use the Right Spray
at the Right Time

"YARRA" BRAND SPRAYS

are the cheapest, most effective and — economical on the market —
We manufacture a complete range — of Sprays for the Orchardist — including Arsenate of Lead (paste and powder), Lime Sulphur, Red Spraying Oil, Copper Soda Mixture, Benzole Emulsion, Spray Spreader etc., etc., etc.

Prices and particulars on application to

PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street
155 Yarra Street
Abbotsford, Vic.

have been in progress at the Oregon Experiment Station since 1917, and by field observation over a period of years in the various Pear districts.

From the data gathered in the course of these experiments and observations, the following conclusions regarding the control of core breakdown appear to be justified.

Picking Time Vital.—Undoubtedly, there is correlation between time of picking and the development of core breakdown. In all the tests made, only the fruit harvested beyond the optimum picking time became affected to any extent. That picked at the beginning of the harvest period and even past mid-season remained practically free from the disease. Growers who habitually harvest their Pears in due season seldom suffer loss from this cause.

Not only can the disease be controlled by picking at the proper time, but it is certain that this can be done without sacrifice of either quality or quantity.

Apparently, the later the time of picking, the more pronounced the disease becomes. Pears picked just at the border line of over maturity usually show only a trace of core breakdown, and this only as they become fully ripe. Those picked later, on the other hand, become affected while still green on the outside, the trouble soon spreading to the entire core area. Early breakdown of the specimens usually occur in such cases.

Proper Picking Season Varies.—The length of the proper picking season for Pears, that is, the length of the period during which Pears can be picked without danger of immaturity at one extreme and core breakdown at the other, varies considerably with different varieties and with different localities. In all cases, however, the season appears to be sufficiently long to afford ample time for harvesting.

The amount of the disease that ultimately develops does not seem to be influenced by either the kind or manner of storage. In the present experiments, the rate of development was practically the same, whether the fruit was kept in cold or in common storage, whether the storage period was longer or shorter, or whether storage was immediate or delayed.

Calendar Dates Not Indicators.—Calendar dates alone are not reliable indicators of maturity in Pears. Again, the proper time of picking may vary from year to year, because of the amount and nature of the crop. Experiments have shown that the proper picking season during heavy crop years may be several days in advance of that in light crop years. The vigour of the trees may also influence maturity in some cases. Maturity may also vary considerably in the same locality because of slight difference in the situation of the orchard.

Extracts from paper by C. E. Barker, Purdue University, Indiana:—

How Oiled Wraps Prevent Scald on Apples.

The question of the use of oiled wraps in preventing storage troubles is one primarily of controlling apple scald. Under the methods of handling fruit in storage prevailing until the last few years, Apple scald caused greater annual losses than all other storage diseases combined, due to the fact that its cause and behaviour are still poorly understood. Scald remains our most serious storage trouble, although it can now be prevented by following certain practices which will be set forth later.

Probably all growers of Jonathans are familiar with this disease as it appears on the Apples in storage or after they are removed.

Misconception Regarding Scald.—Apples, when examined in storage, appear to be perfectly sound, often show a large amount of scald after they have been in warm air for a few days, and this fact has formed the basis for a great misconception regarding the true nature of the disease, and leads to the prevalent opinion that scald is due to the warming of the fruit after its removal from storage. This, however, is not the case, as we shall see later; but the trouble was actually caused while the apples were in storage, giving them

T. STOTT & SONS
Fruit Merchants
Established 1882

A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

11 WESTERN MARKET,
Melbourne

potentially to manifest signs of the disease as soon as favorable conditions are met. Thus, the open air and higher temperatures often cause the disease to show on Apples after their removal from storage, but it must be remembered that the harm was done during the first few weeks of the storage period.

Another misconception is that scald is the result of too low storage temperatures, causing injury to the skin of the Apple.

Relation of Ripening to Scald.—To understand thoroughly the true conditions bringing about Apple scald, it is necessary to understand the life processes taking place within the Apple itself during the harvest and storage periods. It must be remem-

bered that when the Apple is removed from the tree, it is a living organism, whose life processes are still going on. At this time, the Apple is hard, sour and not sufficiently ripe to be palatable. After picking, the life processes continue, the starches are changed to sugars, the acid disappears, the Apple becomes soft and edible.

To show up these life processes and to keep the Apple in a high state of palatability over a long season, storage is resorted to, but it must be remembered that even at temperatures as low as 31 degrees and 32 degrees these changes are slowly taking place within the Apple. As in an animal body, respiration is slowly going on. Oxygen is being absorbed to aid in carrying on these internal processes, and carbon dioxide gas is given off in large quantities, together with other waste products of respiration. It is at this point that the relation of scald is directly connected to the development of the Apple, and here again lies a prevalent misconception, namely, that the accumulation of carbon dioxide gas causes the scald. This is not the case, for it has been established that an accumulation of carbon dioxide rather tends to prevent scald.

During the ripening process, however, other products of respiration besides carbon dioxide are thrown off, among which are esters—the organic compounds that give the aroma to the fruit. It is an accumulation of these about the fruit that cause it to scald. It has been found that if these are removed during the early ripening period, scald can be prevented.

That these fruit esters are responsible for scald has been demonstrated artificially by producing scald on Apples by exposing them to the vapours of certain dilute esters.

Dr. Charles Brooks, of the United States Department of Agriculture, and his associates have been working on this problem for several years, and have devised methods of control. Utilising the ability of fats and oils to absorb odours and gases, they tried successfully to prevent the accumulation of these harmful gases by absorbing them in fats. In the course of these experiments, many substances and means of using them were studied with the oiled wrapper as the ultimate result. An odourless and tasteless type of mineral oils has been developed which does not affect the taste or the quality of the fruit in any way.

Mineral oil wrappers are now being made by several commercial concerns, and are being used in increasingly large quantities each year.

In buying oiled wrappers, the most important point of consideration is the amount of oil contained. The experiments have established that to be most efficient the wrappers should contain 15 to 20 per cent. of oil by weights. There are many important points in these investigations that may assist us to overcome some of our storage problems.

SULCAR
CARBONISED SULPHUR
Spraying Mixture.
THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED
DOES NOT BURN.
Manufactured by
SINCLAIR & Co.
BOX 3, KING ST. P.O. - SYDNEY.
(Works, Alexandria)

GENUINE
"Black Leaf 40"
IN
10lb. & 2lb. tins
DISTRIBUTORS
The PRODUCERS' DISTRIBUTING Society Limited.
SYDNEY and MELBOURNE

Trade with Brisbane.—Messrs. F. B. Bolton & Co., of Albert-street, Brisbane, have a service by which they expect to save the trouble of the seller wanting to get his money before he loses control of his fruit, while the buyer does not wish to pay before despatch. Messrs. Bolton & Co.'s method is for the seller to consign the fruit to them, when they will hand the buyer a delivery order on the railway, in exchange for his cheque, and if necessary an inspection can be arranged before the exchange of delivery order and cheque.

FRUITGROWERS' COOL STORES' ASSOCIATION OF VICTORIA.

The forty-first quarterly meeting of the Fruitgrowers' Cool Stores' Association of Victoria was held at Melbourne, February 23rd.

There were present: Messrs. A. J. Harris (Blackburn), G. Fankhauser (Burwood East), H. L. Tomkins and R. Langley (Croydon), R. M. Finlay (Diamond Creek), J. Tully (Doncaster West), J. H. Lang and H. M. McLean (Harcourt), P. T. Young and J. G. Aird (Ringwood), T. White (Somerville), F. Stockton (Tyabb), C. Wallace and F. J. Byrne (Wantirna).

Mr. J. Robinson's Loss.—The President briefly referred to the bereavement in the family of one of the delegates, Mr. J. Robinson, and advised that a letter of condolence had been forwarded and reply received. He moved that action be confirmed. The motion was carried in silence.

Pre-cooling.—A resolution was carried that this Association get into touch with the shipping campanies and request that a representative discuss with this Association the question of pre-cooling of fruit for export overseas.

Mr. C. C. Brittlebank.—Letter received from Minister for Agriculture, advising that, in response to this and other Associations' requests, the term of Mr. C. C. Brittlebank's appointment had been extended for six months.

It was resolved to request the Government to extend Mr. Brittlebank's appointment for a further term.

Direct Expansion.—A discussion on the Direct Expansion and Air Circulation systems for fruit storage resulted in no definite opinion being arrived at. The question will be further discussed at some future meeting.

Electric Power Charges.—It was decided to invite a member of the Electricity Commission to address the Harcourt conference and discuss the question of electric power as applied to fruit cool stores.

Next Conference.—It was decided to hold the annual conference at Harcourt in August, all cool stores to be invited to send delegates.

Mr. J. G. Aird.—A resolution of appreciation for the services of the Secretary, Mr. J. G. Aird, was carried.

Tasmania

The Export Season :: Seasonable News and Notes

(By Our Correspondent)

THE GOOD RAINS experienced during February and March have slightly altered the prospects of the Apple crop, and an increase over the early estimates may be expected, the total yield being considered to be now in the vicinity of four million bushels.

So far the general quality and condition of consignments have proved to be excellent, and very few reports of rejected lines have been received from the port inspectors.

During March

the Hobart wharves

presented an interesting and busy sight, and owing to the short period of shipment and large consignments coming forward, it has been difficult to obtain the labor and facilities for packing and marketing the huge crop. On the whole, however, matters have proceeded satisfactorily, the greatest difficulty being to cope with quantities that have been sent in excess of those allocated.

Growers are now anxiously awaiting the arrival of the first Australian consignments, and hoping that the somewhat pessimistic forecasts recently appearing in the press will prove erroneous, especially as the industry is generally looking to the "overseas" consignments to offset some of the losses experienced in the interstate trade.

Reduction of Space.—Right at the commencement of the overseas export season, when most growers were endeavoring to increase their shipping space, there came a bolt from the blue in the shape of an all-round 30 per cent. space reduction, necessitated by the tonnage not being available for the bookings. Previous to this, agents were complaining rather bitterly at the way growers were delaying their final applications, and the consequence was that a last minute rush was experienced.

It is understood that the total applications amounted to

over 2,500,000 bushels.

With the tonnage visiting Tasmania, it is expected that just under 2,000,000 bushels will be exported, with a possibility of an increase toward the end of the season.

Tomato and Other Crops. — Last season the Apricot crop was the lightest on record owing to a late frost affecting the principal districts, and prices were correspondingly high. Green Peas and new Potatoes were at a premium owing to the short supplies on the mainland, and the Tomato crop was eagerly gathered up by the factories in view of a probable scarcity owing to thrips and other causes.

This season the Pea crops have not been harvested; a large quantity of Apricots have found the same fate, whilst a proportion has been dumped into the river. Then came an intimation that the factories would not require any Tomatoes for processing purposes.

This was the last straw, and a meeting was called at Glenorchy to try and devise a scheme for at least returning the cost of production to the grower.

This was well attended and ultimately a resolution was passed requesting the factories to process the crop at the growers' expense, such work being a first charge on the sale of the pulp. The Government was also asked to finance growers in the harvesting and processing of the crops on a like basis.

Eventually an agreement was reached, whereby the factories would undertake the processing of the crops and endeavor to market the product for the growers. An arrangement was also made with the Railway Department to obtain orders for cased dessert Tomatoes throughout Tasmania, per medium of the local Station Masters, and to receive and distribute the daily requirements.

Direct Fruit Shipments to Brisbane

Owing to the heavy crops, shipments to the Brisbane markets will commence earlier this season, and an endeavor will be made to run a weekly service to that port, the vessels "Kiwitea" and "Ngatoro" being allocated for this trade. If this can be maintained it will prove most advantageous to growers, and very few consignments will be forwarded via Sydney, owing to the delays and risks to transhipment.

Prune Drying.—A new Prune-drying plant has been installed at Franklin by Mr. E. Linnell to replace the one that was destroyed by fire last season. The drier is of the "tunnel" type, and operated by an electrically-driven fan, wood fuel being used for heating purposes.

The system of handling is very efficient, the trays of fruit being conveyed to the drier in specially constructed cages. These are wheeled into the tunnel and the dried fruit, after pro-

DENNIS & COOPER LTD.

COVENT GARDEN, LONDON, ENGLAND

Fruit Brokers and Commission Salesmen

FINANCIAL FACILITIES OFFERED

Make your Shipments of APPLES *through*

BENDER & CO. PTY. LTD.

Hobart Office: 4 Davey Street. *100 Elizabeth Street, LAUNCESTON*

WHO WILL SUPPLY ALL INFORMATION

cessing, can be similarly conveyed direct to the packing benches. The plant will be used entirely for Prunes.

STATE FRUIT ADVISORY BOARD.

A MEETING of the State Fruit Advisory Board was held at Hobart, on March 6. There were present:—Messrs. B. J. Pearsall (Chairman), V. J. Skinner, J. P. Piggott, M.H.A., A. Davies, T. J. Eddington, F. Peacock, N. Campbell, M.H.A., W. H. Calvert, M.L.C., J. H. Astell, P. H. Thomas (Secretary).

Marketing Tasmanian Apples.

Mr. J. Cooksley, President, Brisbane Committee of Agents, was present by invitation. He detailed his investigations in Queensland, New South Wales, and Victoria, and expressed the view that owing to the abnormal crops, prices throughout the season for Tasmanian Apples and Pears on the Queensland markets would be moderate.

It was decided to request the Brisbane and Sydney Committee of Agents to investigate the distribution of the Tasmanian Apples and Pears throughout New South Wales and Queensland, with a view to extending and developing the markets.

Railway Facilities.

It was also decided to ask the Commissioner of Railways to receive a deputation from the Board to discuss the question of distribution of Apples and Pears throughout Tasmania, particularly with a view to supplying districts which are at present not receiving their full requirements.

Bounty on Dried Apples.

Mr. Peacock detailed the representations which had been made to the Federal Government re a bounty on dried Apples. He mentioned that the Tariff Board was considering the case presented on March 12, and he thought a favorable decision would be made regarding the assistance requested.

Branding Cases. — The Secretary was directed to communicate with Mr. A. C. Seabrook, asking him to request the Minister not to allow any alterations to be made in the existing regulations governing the export of Apples and Pears overseas without first referring any proposed amendments to the Tasmanian State Fruit Advisory Board.

Advertising Tasmanian Apples.

The Secretary was also instructed to cable the National Federation of Fruit Trades' Association, requesting them to ensure that the funds collected from growers this season for advertising purposes, be particularly applied for the advertising of Tasmanian fruit.

THE BLUSHING TOMATO.

Fruit or Vegetable?

Ask Mr. Pratten!

The Minister for Customs, Mr. H. E. Pratten, after long consideration, has decided that the Tomato is a fruit and not a vegetable, and that therefore Tomato products imported must come under the higher "fruit" schedule.

There has been much amusing press correspondence on the subject.

Fruit Shipments
United Kingdom
and the Continent

W. D. PEACOCK
& CO.

24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.

Manufacturers IXL Jam and Canned Fruits.

Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.

All Orchard Supplies available at all times.

Agents for—

Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.

H. JONES & CO. LTD.,
HOBART

It would be interesting for Mr. Pratten to know that at the big Australasian Fruit and Floral Fair, held in the Exhibition Building, Melbourne some 20 years ago, a Tomato, and not a Banana skin, was the cause of the downfall of an exhibitor.

The first prize for "best and most comprehensive display of fruit" was won by a New Zealand exhibitor. In his display he included a dish of Tomatoes.

The exhibitor who was awarded second prize "saw red," that is, he saw the red Tomato, and said that it was not a fruit but a vegetable. He protested. Expert botanists and plantsmen met and discussed the matter, with the result that the New Zealand exhibit was disqualified as definitely as though the intruding vegetable had been an Onion or Carrot, and the first prize was awarded to the man who previously was second.

So Mr. Pratten's problem is not a new one.

The Chairman of the Judges' Committee 20 years ago said, "Gentlemen, is the Tomato a fruit? All in favor say aye, to the contrary No. The Noes have it."

But they didn't stop to reflect that if a Customs Minister at a hostile election meeting had a Tomato thrown at him, both the eyes and the nose would have it, and the removal of the Tomato would not mean the removal of the Minister's problem.

SPRAY RESIDUE ON FRUIT.

Should be Wiped off for Show Purposes.

Fruit Show Committees would be wise to arrange for all spray marks to be removed before permitting the fruit to be displayed.

The spray marks are always unsightly.

The "arsenic" scare is ever with us. Why emphasize the subject by advertising spray marked fruit prominently on show benches?

DON'T PUT ALL YOUR EGGS IN ONE BASKET!

Unsettled times in the fruit industry probably prompted the following from H. J. Baade, of the Napa County Agricultural Extension Service, says the "Pacific Rural Press":

"The value of diversified farming was this week called to our attention by one farmer who informed us that the Prune situation was not worrying him in the least. He has eight cows, six pigs, 350 chickens and a large garden, five acres in Prunes, five acres in Pears, and ten acres in vineyard. We can readily see the point. This farmer practised diversified farming and would not depend upon one crop for his entire income. Others could profit by following his example. The one crop system is too risky. It may at certain times give big profits, but in the long run the person who practises diversified farming will be the most successful."

QUALITY FRUIT TREES

Order Now For . Best Results .

In a "glut" season like this year, the wisdom of growing only quality fruit is emphatically proved time and time again.

Experienced growers insist always on the quality product—in other words, they order GOODMAN'S TREES—trees propagated from proven parentage, expertly grown, carefully handled in their digging, grading, and packing, carefully protected in their delivery.

Below are given popular varieties being freely ordered now. They will command top prices. Supplies forwarded at once.

APPLES.
Delicious, Granny Smith, Jonathan, Cleopatra (N.Y.P.), Dunn's, Romes, Londons, Yates, Gravenstein, Winesap (Stayman's), Rokewood, Statesman, Sturmer, Tasma (Democrat).

APRICOTS.
On either Apricot or Plum Stock.
Blenheim (Shipley), Hemskirke, Mansfield, Moorpark, Newcastle, Oullin's Early, Royal (American), Tilton.

PEACHES.
Bell's November (Dunhelm), Brigg's, Hale's, High's, Levis Cling, Pelora, Peak, Phillips', Pullar's, Sims, Triumph and Wiggins.

CHERRIES.
Bedford's Prolific, Early Lyons, Florence, Eagle's Seedling, Napoleon (Royal Ann), St. Margaret.

PRUNES.
D'Agen (true French), Robe de Sargeant, Splendour, Sugar.

PLUMS.
Golden Drop, Damsons, Green Gage, Jefferson, Magnum Bonum, Pond's and President.

JAPANESE PLUMS.
Apple, Ballena, Burbank, Kelsey, Delaware, October Purple, Santa Rosa, Satsuma, Wickson, Wilson.

Also leading kinds in PEARS, NECTARINES, QUINCES, ALMONDS, WALNUTS, SMALL FRUITS, BUSHES AND ORNAMENTALS.

Send your order to-day, either direct or through our Local Agents.

FREE CATALOGUE
full of valuable information for growers, mailed on request.
Quotes supplied for any order.

CHAS. J. GOODMAN

PICNIC POINT NURSERIES

BAIRNSDALE, Victoria

P. O. Box 47

(W.-McF.)

Planting Fruit Trees

Helpful Hints.

Trees and Varieties for Fruitgrowing Districts.

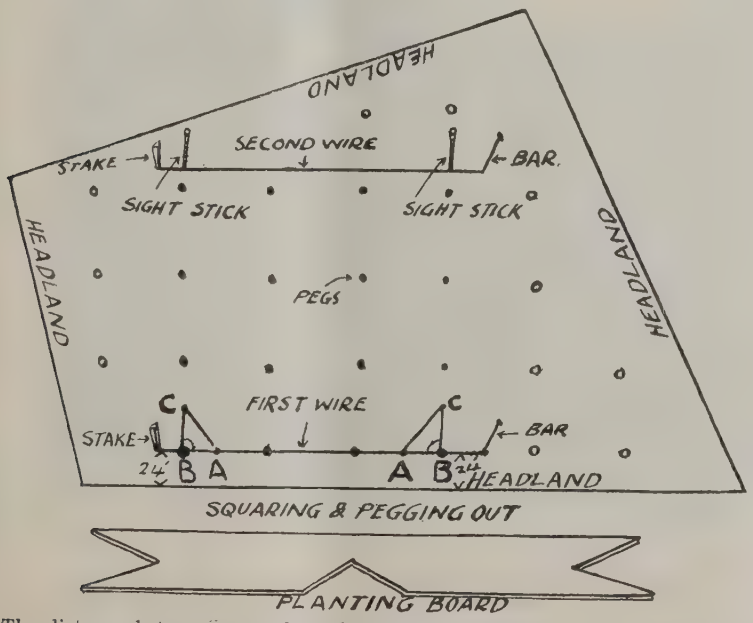
IN THE PLANTING of fruit trees, many considerations are involved —the choice of the right land, the aspect, drainage, liability to frosts; the kind of tree, and the varieties; as well as the practical work of planting.

To properly

Prepare the Ground,

it should be deeply ploughed and cross-ploughed in the spring, followed (if necessary) by subsoiling in the autumn. If hard-pan is at all noticeable it must be broken up, to enable the roots to strike firmly and deeply into the subsoil.

After the ground has been prepared, pegs must be driven in where the trees are required. This will not be difficult if the ground has been harrowed.



SQUARING & PEGGING OUT

PLANTING BOARD

The distance between rows depends entirely on the variety of tree planted. If it will grow into a large, spreading tree, about 24 feet should be allowed.

For pegging out, the use of two marked wires is required—ordinary No. 12 fencing wire marked every 24 ft. with a dab of paint, will suffice—these wires should have a ring or loop at each end, so that a stake can be driven through at the base line end, while a bar may be used for pulling the wire tight at the far end. After measuring off 24 ft. from the fence or channel for a "headland," run the wire cut parallel to the fence and pull tight—this forms your base line, and a peg should be placed at each mark on the wire.

To ensure straight planting, no matter what shape the orchard may be, it is absolutely essential to run the rows at right-angles to this base line, all angular spaces can be filled up afterwards.

The easiest and only practical way to get a right-angle on the base line is as follows:—

At one end of your baseline, at one of the twenty-four feet marks, drive in a stout peg level with the ground. Where the wire cuts the top of the peg, and right opposite the mark, hammer in a nail which we will call nail B.

Now measure from the nail along the wire exactly six feet, and drive in another peg with a nail in the top, which we'll call nail A.

From nail B measure 8 ft. out from the baseline, judging as near as possible a right-angle with the eye; there drive in a nail peg (nail C) in the same manner as before.

To form a perfect right-angle on the base line the nail pegs A and C should be exactly 10 ft. apart—near enough won't do. Numerous measurings and adjustments of nail peg C (the only peg that must be moved) may be necessary to get the adjustments right; but care and exactness in this makes the rest easy.

The measurements should then be nail A to B, 6ft., nail B to C 8ft., nail A to C 10ft. This accomplished, the angle A B C is a right-angle.

Now do the same thing on the other end of the baseline. By sighting through nail pegs B and C, a sight peg (a stake with newspaper or white rag tied round the top is best) should be placed at a measured distance out from the base line.

After doing the same from the second right-angle made, the two sight pegs should be joined with the second wire, and if the sightings have been correct the pegs will be opposite 24ft. marks, and you will have a perfect rectangle, both wires being parallel.

Now peg out along this second line, and the wire can then be stretched between the two rows of pegs, and the pegging out quickly done.

The Actual Planting.

What and when to plant are two questions which, if correctly answered, will save the beginner much disappointment later on.

Mr. H. N. Wicks, of the Balhannah Deciduous Nurseries (S.A.), advises the best varieties to plant in the different districts as follows:—

S.A., Adelaide Hills. — Chiefly Apples, Plums and Prunes. Small areas are available which are admirably suited for Cherry culture in certain localities. Most commercial varieties of these lines do well, but the Cleopatra Apple cannot be grown successfully except in isolated instances.

Angaston and Clare. — Apples, Pears, Prunes, Apricots, and Vines. Large quantities of Apricots are grown in the Angaston district. Leading commercial varieties of the other lines mentioned do well here. The Cleopatra Apple succeeds well in both of these districts. Vines chiefly grown for distillery purposes.

Murray Valley.—Stone fruits and vines. Commercial varieties of stone fruits used for canning and drying are chiefly grown in these districts. Citrus are also extensively grown, while Pears are produced for drying and fresh markets.

Plant Sturdy Trees.

Don't plant trees of inferior quality. By doing so you may find that so-called "cheap" trees will prove very dear, as very often after five or six years it is found that these cheap trees do not bear true to name. Before planting, see that trees have no broken

FRUIT TREES

ORNAMENTALS etc.

Large Quantities Excellent Quality

Catalogue free on application
1928 Edition now available

View of a portion of the Gembrook Nurseries.
A block of Apple Tree Stocks.

C. A. Nobelius & Sons Pty. Ltd.

Gembrook Nurseries, Emerald, Victoria.

Telephone: Box Hill 154

or damaged roots; if they have, remove them with a pair of sharp secateurs; it is also advisable to cut the tops well back, so as to form a well set head.

Early Planting Desirable.

In districts where the average rainfall is 25 inches or under, great advantages may be derived through early planting. If a good rain has taken place sufficient to moisten the soil down to the subsoil, deciduous trees should be planted at the end of May or early in June, though, of course, successful planting can take place up till the end of August.

Citrus and evergreen trees should also be planted after the first rains, while the ground is still warm. When moving citrus plants from the nursery to the orchard do not allow the roots to become exposed to the sun or wind. This is to prevent the roots drying out. Plant the trees in a locality that is not exposed to heavy frosts. It is important (and this applies to all trees) to see that the trees are planted at the same depth at which they grew in the nursery.

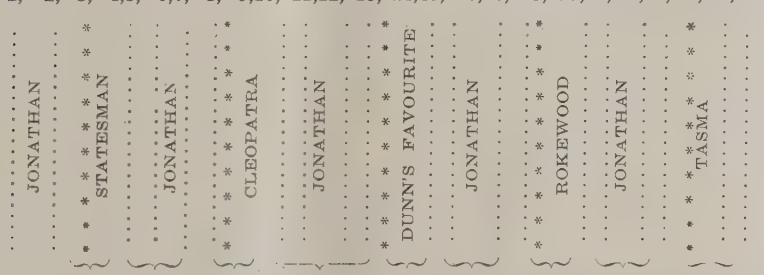
Cross fertilisation has proved itself to be a boon to the orchardist. Especially is it of benefit to Apples, Pears and European Plums. It greatly improves the cropping quality, and reduces windfalls to a minimum.

Our correspondent further quotes his experiences as follows:—

"Although fairly good results have been obtained by grafting one limb on to each tree needing pollination, and this method is often resorted to in orchards that are of bearing age, with good results, it has nothing to recommend it in setting out a young orchard.

"Alternate rows of varieties of the same flowering period have been proved to be the most efficient in the matter of pollination, but every fifth row will give good results. To ensure consistent fruiting, it is not advisable to pollenise a block of one variety with only one pollenising variety, but, if possible, use several, as any one variety may fail to bloom, when in such case, the whole block may suffer, whereas it would be very unusual for three or four varieties to all fail at once.

"The following diagram may be of assistance in illustrating the matter:—



Rows 3, 8, 13, 18, and 23 are pollenisers.

"In the above sketch I have takenJonathan as the variety to be pollenised, as this line has been proved to bevastly benefited by interplanting; in fact, it would be folly to plant this linein blocks without fertilisers."

PLANTING CITRUS TREES.

Some Useful Hints.

The present is a good time for planting out young Citrus trees if the soil is in a suitable condition.

All poorly-developed trees should be rejected without hesitation. Only healthy, robust trees with a good root system should be planted.

Great care should be taken that the roots of the young trees are not allowed to become dried out by exposure to the sun or air between the time they are lifted in the nursery and the time they are planted. It is a good plan to dip the roots in a puddle of clay before packing to reduce loss of moisture while in transit.

The trees should not be planted deeper than the depth at which they stood in the nursery, and in shallow soils where top-dressing is practised they should be planted rather shallower. When planting is completed, the ground should be ploughed up to each row of trees.

The ends of all damaged roots should be cut off smoothly, and the roots well spread in the hole and covered with loose moist soil, which should be pressed tightly around them, If the weather turns dry after planting, the trees should be irrigated or (if irrigation be not possible) each tree should receive a couple of buckets of water. This should be applied by forming a basin round the tree, and after the water has soaked away, filling the basin in with dry soil. The tree should be cut back after planting.

If the leaves along the stem drop, as they often do, the bark should be protected from the hot sun with bagging or other covering.

Apples, Apricots, Almonds, Cherries, Figs, Nectarines, Peaches, Plums, Prunes, Damsons, Pears, Loquats, Quinces, Oranges, Lemons, Mandarins, Grape Fruit, Persimmons, Vines, Etc.

LASSCOCK'S TREES

HAVE A GREAT REPUTATION

Grown under ideal conditions in the fertile soil at our spacious nurseries, our trees give splendid results when transplanted to new quarters—our customers say so.
All worth while varieties are grown, and we pay special attention to packing.

Send for a Catalogue. Our prices are right.

LASSCOCK'S NURSERIES
Lockleys - - South Australia.

In districts subject to frost, the trees should be sheltered by bushes, bags, or cornstalks for the first two or three winters after planting.

In N.S.W. coastal districts (states the Department of Agriculture), it is often possible to reduce the initial expenses of planting a Citrus orchard by inter-planting crops like Peas, Beans, Tomatoes, Turnips, and Potatoes; Passion-fruit are often grown between rows of Citrus trees, but none of these things should be attempted without liberal manuring, good cultivation, and an assured rainfall or irrigation.

CITRUS AND DECIDUOUS.

Experiences from New South Wales. Nut Culture Advocated.

Messrs. L. P. Rosen & Son, Fernhill Nurseries, Epping, N.S.W., report under date March 9:—

We are mainly interested in N.S.W. and to a smaller extent in the Stanthorpe district and Mildura district, and as far as the irrigation areas are concerned, there seems to be a good demand for Washington and Valencia Oranges, Marsh's Grapefruit, and Granny Smith Apples.

In the **Bathurst** district, the demand seems to be coming chiefly for Apples and in a smaller degree Peaches and Nectarines. **Orange** seems to be largely going on the leading commercial Cherries that we grow over here, such as St. Margaret, Napoleon, Florence, Early Lyon, etc., and also seems to be planting a fair number of Peaches, Pears and English Plums.

The **Gosford** district seems to be concentrating chiefly on Washington and Valencia Oranges, Lemons, Emperor Mandarins and Marsh Grapefruit.

The **Glen Innes** district seems to be chiefly going in for the leading commercial Apples and to a limited extent Pears, Peaches and Cherries, although the latter are very risky in this district owing to it being subject to late spring frosts.

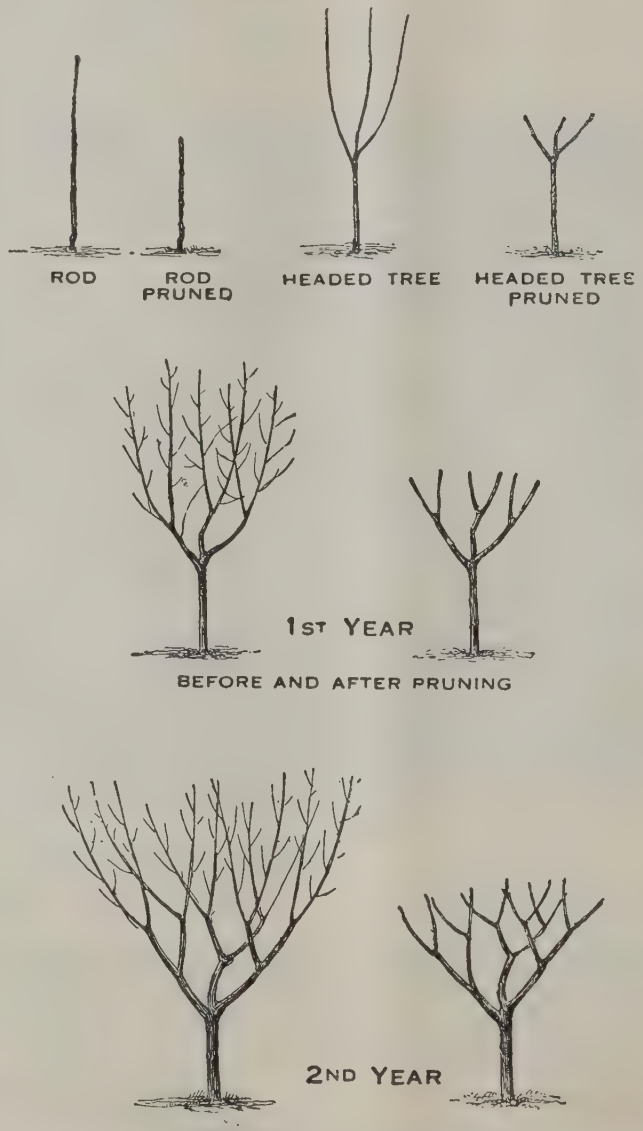
Stanthorpe district, in Queensland, are chiefly planting good commercial varieties of Peaches, and also Santa Rosa and Wilson Plums. Apples, we believe would also be largely planted, but as the Northern Spy stock is not allowed entry, we are not allowed to sell them there.

In the **Mildura** district, there has been a fair planting of Valencias, Washington, Marsh, and also in a smaller degree Early Imperial Mandarin—an extremely early variety, and around the hills district of **Sydney**, the planting has mostly been for extra early varieties ripening up till New Year, and in places large plantings of Wilson and Santa Rosa Plums.

With reference to the districts suitable for **Nut-culture**:—The best Nut that we have on the coastal belt which appears promising, is the Pecan Nut, also our native Macadamia, but as neither of these has been fully tested out in most places, it is hard to give any definite opinion. **Walnuts**, in the **Southern Tablelands**, where they have sufficient moisture, should also prove a payable proposition, and **Almonds** in the **Riverina** district should be successful, but so far, large plantations of these have not yet been established.

The Apple Stock Question.

In regard to the Apple stock question: Until a suitable seedling can be secured that is absolutely blight-proof, with Queensland at any rate, we think there is a big risk of infection. Up to the present of course, we are not aware to what extent the Aphelinus Mali parasite will operate underground when trees are affected on the root, but if they will do their work well, then a good deal of the risk is obviated in planting seedlings. We ourselves would certainly not plant seedlings unless we knew that they were blight-proof.



(Illustration by courtesy of C. J. Goodman, Bairnsdale, Vic.)

Nut Culture.

Vast Expansion Possible in Australia.

NUT CULTURE is a subject to which primary producers in Australia might well pay special attention. Large quantities of nuts of various kinds are imported here, while all the time we have the soil and climate suitable for supplying our own need and the export trade as well. The opinion of Mr. H. N. Wicks, fruitgrower and nurseryman, of Balhannah, in the Adelaide Hills, is worth noting on this subject. He writes:—

"I am convinced that a very profitable business could be built up in this connection in the production of Almonds in certain spots along the Murray Valley. Given proper care and attention there are several varieties which yield immense crops of nuts, and an example of this can be seen in the Government Orchard, at Berri. I am also convinced that this line has never had a fair deal in South Australia.

"Most people who grow Almonds treat them as a hedge, and the idea of giving them a little attention never occurs to them. That they yield anything at all, with the treatment they get, is often a mystery to me, but they would respond to good treatment is beyond question."

One is not blind to the fact that there are commercial plantations around Adelaide which are well kept and no doubt pay well for the trouble, but these are in the minority. Unquestionably there is room for vast expansion in the business.

THE MACADAMIA NUT.

Wonderful Possibilities Ahead of this Australian Native Plant.

Mr. H. J. Rumsey, seed and plant merchant, of Dundas, N.S.W., has recently been devoting attention to the development of the Macadamia, or Queensland nut (Macadamia ternifolia), and has a high opinion of its value as a commercial nut. Mr. Rumsey recently visited the South of Queensland and the North Coast of N.S.W., where he investigated the different types of this nut, and has discovered not only some thin-shelled types, but other variations, one of the most valuable being a continuous fruiting variety, producing two main crops, June and December, with partial intermediate crops. The Maroomba plantations, Mullumbimby, N.S.W., have 2,500 trees planted out, and Mr. J. H. Gaggin, in the same districts, has 1,250 trees, and is planting more.

Mr. Rumsey has forwarded copy of a report from the annual report of the U.S. Department of Agriculture, Honolulu Experiment Station, regarding this nut, which is being extensively grown in Hawaii; he states: "They appreciate the Australian nut more than we do." The report states:—

The Macadamia, or Queensland nut (Macadamia ternifolia), is one of the most promising of all nuts for improvement, and for commercial cultivation within the tropics or subtropics. It has received little attention, however, and in fact has been almost wholly neglected, notwithstanding the fact that it is unexcelled in richness and delicacy of flavor. This is one of the most obscure tropical products which should be brought to light, improved in some respects so as to be better adapted for commercial use, and thus be made to play an important part in feeding the world.

The tree is of upright growth, attains a height of probably 35 feet, has dark green foliage and rather dense head, and begins to bear when from five to eight years of age. The nuts, which are incased in a hard shell one-eighth inch thick, are brown in color and about 1¼ inches in diameter. The kernel is perhaps three-fourths inch in diameter, nearly spherical or slightly flattened, white, and of a delicious flavor. It resembles the Brazil nut, but is regarded by many as milder and more pleasing.

The trees of this species vary greatly in respect to productivity, size of nut, character of foliage, and bearing age. This is one of its splendid features, and gives rise to hope for great improvements by selection. One of the first changes brought about should be a softening of the shell, which is hard and thick. This feature probably is highly responsible for the failure of the nut to be more widely recognised and disseminated.

PRESERVING FRUITS IN GLASS.

Californian canners are putting up largely increased quantities of fruits in glass containers, as it has been proved that the glass adds greatly to the attractive appearance and facilitates marketing.

No Scotchman in Heaven?

A Scotchman knocked at the gate of Heaven, and told his nationality. Peter asked him to wait whilst he made enquiry. He eventually returned and said he was sorry to refuse admittance, but they had decided they could not make porridge for one.

Are You Planting Fruit Trees this Season?

If so, do not forget that we have ample supplies to offer.

Trees grown at Kinglake and Yarra Glen

Larger, Stronger, Healthier than ever

Apples.—Jonathan, Five Crown, Rome Beauty, Cleopatra, Granny Smith, Delicious, Democrat, Statesman, etc.

Also Pears, Plums, Peaches, Apricots, Quinces. Best varieties.

We must sell and are prepared to sacrifice the best trees for one season at prices far below the cost of production. Do not miss this chance—

Write now.

JAMES W. LAWREY, Kinglake Nurseries, Yarra Glen

THE APPLE OF CONTENT.

The Eden of Granny Smith.

What Sprang from Contents of Fruit Case at Ryde, N.S.W.

IS GRANNY SMITH the most popular Apple in Australia? Or will it be the most popular within the next ten years?

One thing is certain. Granny Smith has won an honoured place in the history of the Australian Apple industry.

An interested "Fruit World" subscriber, Mr. Stott, of Wheeler's Hill, sends us the following interesting notes:—

Ryde must erect a monument to Granny Smith. No lesser honour is due to a woman who gave all mankind a new delight—that Apple of supreme content, the "Granny Smith."

The original parent tree is lost, and of the woman who perpetuated its kind nothing remains but a happy memory in the minds of her children.

That memory should be immortalised for the world in material form. Such a monument might well be the object of an annual pilgrimage, and no better year for its erection than this, the jubilee year of a great discovery.

Sixty years ago a Sydney woman emptied the packing and other litter from a fruit case near the creek adjoining her garden, and thus unknowingly set the first seed of what is now one of Australia's finest eating and keeping Apples.

Ask any fruit vendor for the sweetest and most juicy Apple on his stall, and 99 times out of 100 he will show you a large, green, almost Pear-shaped Apple, which, to the unknowing, looks fit for culinary purposes only. Inquire the name of the Apple and you will be told it's a Granny Smith, most luscious and the best keeping of any Apple, yet the average man could not tell how it first came to be grown in Australia, or how it derived its name.

Back in 1867 Mrs. Smith, wife of Thomas Smith, then Mayor of Parramatta, bought some old fruit cases at the Sydney markets. In the bottom of one case were the remains of some Tasmanian Apples known as French Crabs. The fruit, being in a decayed condition, Mrs. Smith emptied it, together with the packing the case contained, on to the banks of a creek which ran past their farm at Ryde.

Later, Mrs. Smith noticed that an Apple tree had sprung up on the spot. This tree she watched until it bore fruit.

One day E. H. Small, accompanied by his 12-year-old son, called at the Smith farm, and was invited down to the creek to give an opinion on the stray Apple tree. Small, who was the owner of a big orchard and an expert pomologist, with a thorough knowledge of all species of Australian Apples, said that this particular Apple was a stranger to him, and appeared to be good for culinary purposes only.

Small's young son, Tom, however, had also been examining the Apples, but he went more thoroughly into the subject with his teeth, and exclaimed, on hearing Dad's verdict, "My word, this Apple's a beaut. Taste it, Dad." Small and Mrs. Smith then sampled the fruit, and both agreed with the youngster.

Seedlings were planted subsequently in an adjoining paddock by Mrs. Smith, who soon had a good supply of "Granny Smith" Apples—for as such they soon became known—for the Sydney markets. The original tree was cut down during clearing operations on the old Ryde farm.

There must be something in the old Apple a day adage, according to the descendants of Granny Smith, some of whom still reside in Sydney and boast of their good health.

Mrs. McRoberts is a daughter of the late Granny Smith, and to-day, 80 years of age, is hale and hearty, and can distinctly remember the incident of the Granny Smith Apple.

Granny Smith was the mother of 14 children. Mrs. McRoberts, her daughter, has reared 15, while her daughter again (grand-daughter of Granny Smith) has 16 children.

"Put it down to Granny Smith Apples," says Mrs. McRoberts. "I myself eat as many a day as I can get, and I'm still able to recall with pleasure the flirtations of my flapper days."

MONUMENT TO "GRANNY SMITH."

Mr. Herbert J. Rumsey, of Dundas, N.S.W., who is a well-known and highly respected horticulturist, is keen to have a monument to the Granny Smith Apple, and he is obtaining details of American memorials to their noted fruits. A list of American monuments is being compiled.

The idea is well worthy of consideration, and it is to be hoped that the project will be proceeded with.

It is right and proper that the seal of public appreciation should be placed on such discoveries of major importance to an industry.

FRUIT TREES IMPROVED BY ROOT SELECTION.

Although the ordinary fruit tree is an "assembled article" in which the part under ground is generally grown from seed and the part above ground is the result of grafting a bud on the seedling root stock, horticulturists in the past have confined their improvement efforts to the part of the tree above ground. Recently, however, the United States Department of Agriculture has undertaken to bring about further improvement by developing a method of producing better root

FERGUSONS' PEDIGREE FRUIT TREES

APPLES, PEARS, PEACHES, ALMONDS, PLUMS, CITRUS (All Sorts, Including VALENCIA, WASHINGTON, GRAPE FRUIT), PERSIMMONS, APRICOTS, CHERRIES.

Quality Prime for 1928. Satisfaction Assured. Get Our Prices. Catalogues Ready.

Established 1848. F. FERGUSON & SON Australian Nurseries.

Also at Camden. HURSTVILLE, N.S.W.

stocks, or underground parts on which to graft or bud the desired varieties, says the "Seed Trade News."

It is well known by nurserymen and orchardists that most fruits do not reproduce varieties from seed; that budding or some other form of vegetative propagation must therefore be used to multiply a given variety. It is not so well recognized, however, that **seedling root stocks also vary in their hereditary make-up.** The practice of producing most root stocks from seed is probably responsible for much of the irregularity in their performance and the ultimate failure of many orchard trees.

Guy E. Yerkes, horticulturist in the Bureau of Plant Industry of the department, has conducted enough tests to show that some root stocks can be propagated by means of root cuttings and in this way faithfully reproduce the mother root system. The mother trees selected have shown exceptional vigor and indications of resistance to insects and diseases. The vegetative propagations from these mother trees are being tested to determine their affinity for the varieties worked on them and their adaptability to a wide range of conditions by planting in orchards. Several Apple, Cherry, and Plum selections already made are showing superiority over seedling stocks in the nursery. By propagating them vegetatively—by means of cuttings or layers rather than by seed—the characteristics of the mother plant are assured in the progeny.

Inexpensive and rapid propagation of the selected and proved individuals is an important problem. Much of the difficulty experienced at first in that connection has been overcome and methods have been developed which promise commercial application of this means of improving the underground part of fruit trees. Several years' tests under orchard conditions will be necessary to bring out the qualities of these selected stocks before introducing them.

Sulphate of Ammonia.—For increasing crops and soil fertility, sulphate of ammonia is appreciated by orchardists and gardeners. A steady increase in the use of sulphate of ammonia is reported from all quarters. Booklets on the subject are obtainable from the Metropolitan Gas Co., 196 Flinders-street, Melbourne.

APPRECIATION.

Please find P.N. for 8/6 in payment of the enclosed account. I would like to mention that I place a high value on your "Fruit World." The articles printed for the orchardist are very helpful, and I look forward to each issue as it comes along.—J. D. Hunter, Young, N.S.W., 6/1/28.

Queensland.

MOUNT MELLUM.

Banana Culture.

There is little or no spraying done in this district. Our chief pest is the Banana borer beetle. To combat that we use Paris green mixed with flour. Five parts of flour to one Paris green. That mixture is applied liberally in and around the stools. After a bunch has been cut the stem is cut down, and a piece cut off from or scooped out of the butt. Paris green mixture is plentifully applied on the butt and on the piece, and the piece is replaced where it was cut or scooped from.

The General Cultural practice here is chipping, spring, summer, autumn and winter. If the rainy weather prevents chipping for more than a week, it is necessary to brush the weeds down, as they grow to a height of ten or twelve feet in a few weeks.

Some growers occasionally spray the weeds with arsenate of lead and caustic soda, but it is not a general practice.

General.

Prior to this summer we have had three years, during which the rainfall has been insufficient. We had heavy rains for a few weeks, and then dry spells interspersed with light rains. The land here is very steep, and most of the rain runs away as it falls, taking away with it much plant food. The rest dries out in two or three days. Bananas need a good soaking, not less frequently than once a fortnight.

Scene outside the daily retail Public Market at Seattle (U.S.A.), where large quantities of fruit are sold by producers. Australia could do with more public marketing facilities.

I also sprinkle some Paris green mixture on and under the butt end of the cut off stem, where it lies on the ground.

Manuring.

Very little manuring is done in this district; but one grower here has used "Bana" fertiliser with good results.

The only form of green manuring practised is the chipping in of weeds. Stinking Roger grows very thick and rapidly during the wet season, and can be chipped in with good results.

The Principal Fruits grown here are Bananas ("Cavendish"). Catch crops of Beans and Tomatoes are grown by some growers for the early spring market. There is no frost here. Cucumbers are also grown in the same way. They survive dry weather marvellously, but do not do well in it; and it takes them a long time to recover from a setback. The recent rains have made the plants grow, but the bunches they are now throwing are small, being really not the product of the immediate past, with its rain, but of the dry time preceding that.

There have been no developments in this district worth mentioning since I came here six and a half years ago.

In which class are you? Are you easing the load
Of overtaxed lifters who toil down the road?
Or are you a leaner who lets others bear
Your portion of worry and labor and care?

—"British Weekly."

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.

Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Davis, J., Western Market.
Dennys, Lascelles Ltd., Temple Court, Melbourne.
Millis, A., & Sons, Western Markets.
Mister, G., Western Market.
Mills, J. B., & Co., Bank House, Bank Place Melbourne.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, 325 Collins St., Melb.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
F. B. Bolton.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters, and at London.
Piesse & Co., C.

Launceston.

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.

Dennis & Cooper Ltd., Covent Garden.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salters Hall Court, Spitalfields Market, E.1.

Hull.

White & Son Ltd.

Manchester.

The Port of Manchester, rep., W. J. Wade, 8 Bridge Street, Sydney.

GERMANY.

Bremen.

Fruchthandel, Gesellschaft.

Hamburg.

Astheimer, P. H., & Son, Fruchthof.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

Australian Markets.

Victoria.

Melbourne (24/3/28).

The following wholesale prices ruling at the Western Market:—Some special lines brought higher prices, but considerable quantities were sold at lower prices owing to inferior quality, bad packing and grading:—Apples, choice dessert, 2/- to 4/- per case; cooking, 1/6 to 3/6; Grapes, Walthams, 8/- to 15/-; Muscatels, 7/- to 13/-; Lemons, Vic., 15/- to 18/-; imported, 22/- to 24/-; Oranges, Victorian, 16/- to 21/-; imported, 22/- to 23/-; Navels, imported, 40/- per double case; Passion Fruit, 6/- to 11/- per case; Peaches, yellow flesh, 1/6 to 4/6; Pears, 2/- to 5/-; Pineapples, Queens, 11/- to 14/- per double case; Tomatoes, choice, 5/- to 8/- per case; others, 1/6 to 4/-.

New South Wales.

Sydney (30/3/28).

Apples. — Local, eating, extra choice, 8/- per bushel case; choice, 7/-; medium, 4/- to 6/-; small, 2/-; cooking, 2/- to 6/-; Tasmanian, Worcesters, Alexanders, and Duke of Clarence, 3/- to 5/-; Jonathans, 5/- to 7/-; Alfristons and Fannies, 4/- to 5/-. Bananas.—Extra special, nominally, 30/- to 35/- per case; special, 22/- to 26/-; choice, 16/- to 20/-; standard, 8/- to 14/-. Citrus Fruits.—Lemons, extra choice, 14/- to 16/- per bushel case; choice, 10/- to 12/-; medium, 7/- to 9/-; small, 4/- to 5/-; Mandarins, 4/- to 12/-; Oranges, main crop, extra choice, 15/- to 16/-; choice, 12/- to 14/-; medium, 6/- to 8/-; small, 2/6 to 5/-; second crop, 2/- to 5/-; extra choice, to 10/-. Custard Apples, 5/- to 8/- per half-case. Grapes.—Cornichons, 8/- to 10/-; Walthams, 7/- to 9/-; Sherries, 4/- to 5/-; Black Hamburgs, 4/- to 6/-; Muscatels, black, 6/- to 10/-, few to 13/-; white, 4/- to 7/-. Passion Fruit.—Extra choice, 9/- to 10/-; choice, 7/- to 8/-; medium, 5/- to 6/-; small, 3/- to 4/-. Peaches.—Victorian, 3/- to 6/-, few to 9/- per bushel case. Pears.—Local, eating, 4/- to 7/-; cooking, 2/- to 4/-; Victorian, 3/- to 5/-, few to 7/-; Tasmanian, Buerre de Cap and Buerre Bosc, 4/- to 6/-; Packham's, 5/- to 7/-; Winter Coles, 5/- to 8/-. Persimmons, 2/6 to 4/- per half-case. Pineapples.—Queens, 10/- to 15/- per case. Plums.—Local, 3/- to 7/- per half-case. Quinces, 4/- to 8/- per case. Tomatoes.—Local, 6/- to 12/-; Tasmanian, 4/- to 8/- per half-case.

South Australia.

Adelaide (17/3/28).

Apples (eating), 4/6 per case; do. (cooking), 3/-; Bananas (Queensland), 28/- to 30/-; Blackberries, 4/- per doz. lbs.; Figs, 13/- per case; Grapes (dark), 9/-; do. (white), 9/-; Lemons, 16/-; Oranges, 18/- to 20/-; Passion Fruit, 20/-; Peaches, 5/-; Pears, 4/- to 5/-; do. (cooking), 3/- to 4/-; Pineapples, 18/- to 20/-; Plums (Prunes), 5/-; Quinces, 3/6 per case; Strawberries, 1/- per doz. lbs.

Queensland.

Brisbane (17/3/28).

Local Fruit:—Apples, Stanthorpe, eating, Jon., 5/- to 6/-; others, 3/- to 5/-; inferior, 2/- to 3/- a bushel case; cookers, G.S., 5/- to 6/6; others 3/- to 5/-; Lemons, 2/6 to 5/-; Limes, 4/- a half-bushel case; Pineapples, rough leaf, 1/6 to 7/6 a dozen, 9/- to 12/- a case; Smooth leaf, 1/6 to 6/- a dozen, 5/- to 7/- a case; Papaws, 7/- to 10/- a case; Passion Fruit, 7/- to 13/- a half-case; Peaches, 1/- to 3/-; specials, 4/- to 5/-; Grapes, white, Roma, 2/- to 3/- a case; Stanthorpe, 1/- to 3/-; Black Hamburgs, 2/- to 5/-; Black Prince, 2/- to 5/-; Royal Ascot, 2/- to 5/-; Muscatels, 3d. to 3½d. a lb.; Mangoes, 4/- to 7/- a case; Persimmons, 2/- to 5/- a half-case; Custard Apples, 8/- to 10/-.

Tasmania.

Hobart (17/3/28).

St. Lawrence, choice colored, 4/6 to 5/6; fair to medium, 2/6 to 4/-; L.S. choice colored, 5/4 to 6/3; fair, do., 4/- to 5/-; small and pale, do., 2/- to 3/6; C.O.P., choice, 4/- to 4/6; fair, 3/6 to 3/9; small and pale, 2/6 to 3/-; Alex., choice, 3/6 to 3/9; fair and medium, ditto, 2/6 to 3/2; W.P.M., 2/6 to 3/-; Grav., choice, 5/- to 5/9; fair, ditto 3/6 to 4/3; soft and over-ripe lots, 2/6 to 3/-; R.P., best, 3/- to 4/-; fair and medium, 2/3 to 2/9; Alf., 2/6 to 3/-; B.O., 2/6 to 3/-; N.Y.P., 2/6 to 4/-; Jon., 3/- to 4/-; P.G.N., 3/-; Pears, B.B., 3/6 to 4/6; B.D.C., 1/6 to 2/6; G.B., 2/6 to 6/3; W.B.C., 2/6 to 4/-; N.P., 2/6 to 3/6; B.C., 2/6; Duchess, 3/- to 4/6 per case; Plums, Golden Drop, 3/6 to 4/6; Prunes, 4/- to 4/9:

Tomatoes, 1/6 to 3/-; Blackberries, 1½d. to 2d. per lb.

Western Australia.

Perth (17/3/28).

Apples, Dunns, flats, 5/- to 8/- (others from 3/-), dumps, 6/- to 9/- (special, to 11/-); others from 4/-; Cleopatras, flats, 5/- to 8/- (others from 3/-); dumps, 6/- to 10/- (special to 12/6, others from 4/-; Jonathans, flats, 4/- to 8/6; dumps, 9/- to 15/- (special to 16/-, extra to 19/-), others from 6/6; Pears, flats, 7/- to 12/- (others from 3/-); dumps, 12/-; Valencias, flats, 18/- to 22/-; Navels, flats, 13/- to 17/- (special to 19/9); Peaches, flats, 8/- to 11/6 (special to 14/-); dumps, 7/- to 14/6 (special to 16/-); Grapes, Muscatels, open, 5/- to 8/- (special to 9/6); other varieties, open, 7/- to 11/- (special to 11/-); Strawberries, 23/- per doz. punnets; Passion Fruit, flats, 8/- to 11/6 (special, 17/9); half dumps, 12/6; Figs, flats, 3/- to 6/-; trays, 5/-; Plums, half dumps, 7/- to 8/9; Quinces, flats, 3/- to 6/-; dumps, 4/- to 7/6 (special to 9/-).

VEGETABLES HAVE MEDICINAL VALUE.

CERTAIN VEGETABLES have long been given popular recognition as curative agents. Even before dietetics became a science or the vitamin theory was given publicity, Garlic was urged in cases of whooping-cough, Tomatoes for cholera infantum, and Pepper tea for scarlet fever. These old home-made remedies, descended to us through ages of reliance on the "herb doctor," have the support of at least one large group of doctors.

In "Health and Longevity," a book of 1,432 pages, edited by Dr. Joseph G. Richardson, professor of hygiene in the University of Pennsylvania, assisted by a number of physicians in this and other countries, included the following vegetables and small fruits in the list of medicinal plants:—

Asparagus—Gently stimulates the kidneys.

Beet—Relieves gravel and readjusts certain disorders of women.

Carrot—For kidney complaint; used for poultices—powdered seed relieves colic; promotes secretion of kidneys.

Celery—Good for rheumatism and neuralgia.

Cucumbers—For clear complexion.

Garlic—For worms, whooping-cough, stomach and intestinal trouble.

Horse-radish—Tonic for digestion; promotes secretion of kidneys; syrup cures hoarseness; tea said to benefit neuralgia and rheumatism.

Leek—As poultice in bronchitis and chronic coughs; taken for worms, whooping-cough, stomach and intestinal trouble.

Navy Bean—Relieves erysipelas; poultice of which may be applied to affected parts with good results.

Onion—Promotes digestion; acts on liver by increasing secretion of bile; cure for constipation; taken for worms (animal and man), and for whooping-cough, intestinal and stomach trouble.

Pepper—Cayenne tea used for grippe and scarlet fever.

Parsley—Hot infusion made from ounce of fresh root and drunk freely increases secretion of urine in case of dropsy, and relieves women's complaints. Lotion is good as skin beautifier.

Pumpkin—Good for tape worms, retention of urine and inflammation of bladder and bowels.

Rhubarb—A purgative and laxation.

Spinach—A skin beautifier.

Strawberries—Lotion used as a skin beautifier.

Tomato—Cure for cholera infantum; now used instead of Orange juice by some physicians for infants; sliced Tomato rubbed on skin is good for freckles and sunburn.

Watermelon—Clears skin.

We do not vouch for any of them any more than for the drugs and ointments that are part of the medical man's outfit. But experience has taught generations of those who have used vegetables as health foods, and has convinced many doctors that Nature manufactures her own cures and presents them to us in various vegetable foods in a very pure form. All we have to do is to eat them properly. And this means—Eat More Vegetables.

NEW ZEALAND NOTES.

(By Our Correspondent.)

A Useful Experiment.

We gardeners in the north of New Zealand, have just passed through a very trying dry season, no rain has fallen for four months. In certain parts of the country I have been trying out experiments to combat, to a certain extent, the lack of moisture in the summer, and on all occasions the losses of plant life have been very light in comparison with other districts. The experiment is simple, one that we all know but do not realise its full value, and for this reason I submit it to my Australian readers.

Humus in Soil Needed.

For years people have preached the immense value of humus in the soil. Now that the dry weather is upon us, we realise more fully what the value of humus means. Hundreds of plants and trees have died through the recent drought, and I have no hesitation in stating, if more green stuff had been dug into our gardens to act as manure and hold the moisture, less plants would have died.

From experimental figures we have the following results:—

100 lb.	sand,	will hold	25	lbs.	water.
100 „	clay	„ „	50	„	„
100 „	humus	„ „	190	„	„

In addition, it promotes a chemical action which makes available to plant life, foods in the soil which are unaffected by other manures. Therefore, to save water and grow better plants, put more humus in your garden.

The Best Green Manure Crops.—There are many recognised seeds sown for green crops, but the best varieties for small gardens are Lupins, Mustard, Peas, Oats and Rye grass. All these contain a great deal of moisture which helps the foliage to rot quickly when dug in. Lupins are perhaps the best for small gardens, and should be broadcast and dug in just before the flower shows.

In very dry soils, a sowing of mustard is good. This contains much moisture, and is, therefore, excellent for this class of land.

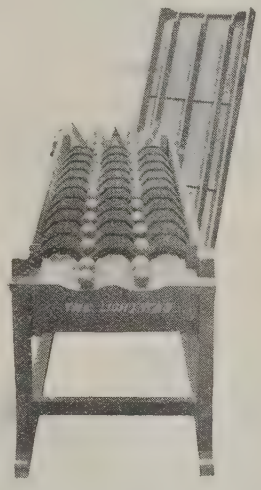
If gardeners would only take notice of these few remarks, they would be amply repaid in their crops, and save money in artificial manure.

INSECT PESTS OF LAWNS AND BOWLING GREENS.

Cockchafer Grubs.

Cockchafer grubs have recently been causing a fair amount of damage to lawns and bowling greens. They eat the roots of the grass, causing bare patches. The grass leaves are also eaten by these grubs, which usually come up at night to feed.

Spray the lawns thoroughly with arsenate of lead. The spray should be forced well into the plants.



"To Choose the best is Wisdom"

Australia has the Goods

Complete Up-to-date Equipment

for

CITRUS PACKING HOUSES

including

WASHERS
DRIERS
POLISHERS
SORTING TABLES
GRAVITY CONVEYORS
BOX PRESSES
PACKING STOOLS
PAPER HOLDERS

Write for particulars of Equipment for preserving Citrus Fruits from BLUE MOLD, Etc. We supply for **PACKING HOUSES** and **INDIVIDUAL GROWERS.**

THE "LIGHTNING" FRUIT GRADER CO.

5 Hoddle Street, Collingwood, N.9, Melbourne

Cable, Telegraphic Address, "LIGHTNING," Melbourne VICTORIA

Victoria

Fruit Crop Reports ∴ Fruit News ∴ News and Notes

VICTORIAN FRUIT CROPS.

Seasonable Report.

THE APPLE and Pear crop has benefited considerably by the recent heavy, soaking rains. All kinds of fruit trees and plants are now making splendid growth, and are remarkably free from fungoid diseases (states the Victorian Superintendent of Horticulture in his report of 1st March).

The **Peach yield** this season was unprecedentedly high. Owing to the cool changes in the weather the supply was much greater than the demand, consequently second and third class fruit was difficult to dispose of at remunerative prices.

The midsummer Peaches and W.B.C. Pears were of prime quality. A much larger quantity of Elberta Peaches would have been dried this season, but the weather was unfavourable for sun-drying, which system of drying is practised by the majority of growers. This variety also clashes with the early maturing W.B.C. Pears, and for this and other reasons the number of trees in the Goulburn Valley is being reduced every year.

Prunes suffered rather severely owing to the abnormal rains. Fully 50 per cent. of the "Splendor" Prunes were split, and the d'Agen Prunes also suffered, but not so severely.

The heavy rain also caused susceptible varieties of Apples to "pit" badly, due, doubtless, to the abnormal sap flow.

Pullars Cling Peaches should be a record crop.

Despite favourable conditions for Brown Rot, this fungus has done little damage; fruit is keeping remarkably free from disease.

There is promise of a heavy late crop of **Strawberries** and **Tomatoes. Passion fruit** also promises well for late crops.

The **export of Apples** is now in full swing, and particular care is being exercised to prevent the exportation of immature and undesirable fruit. The season commenced on the 14th February, with the sailing of the s.s. "Narkunda." The fruit is in excellent condition, though improvements are still necessary in some districts with regard to the packing and casing of the fruit. For the month of February, 163,124 cases of Apples and 3,933 packages of Pears were shipped. The estimated export of Apples for this period was 148,500 cases.

Viticulture.

February was remarkable for extraordinary falls of rain throughout the State.

So far, the damage caused by such unseasonable downfalls is much less than might have been expected, though, where the rain was heaviest, damage has resulted. Currants suffered most, but sultanas have also been affected; the point of attachment to the pedicel has been weakened, and dropping of berries has resulted.

There will be but little "cold dipping" of sultanas in consequence, the risk of dark berries being too great. The warm (temperature) dip is in greatest favour this season, and where rain was very heavy the hot dip is being practised.

No important outbreaks of Downy mildew have as yet been reported, but such are to be expected on unsprayed vines. The fungus has made its appearance at Albury and also near Shepparton, but not in an intense form.

Black spot is noticeable on a good many sultana vines in some of the irrigation areas. Though no damage has yet occurred, there is sufficient contamination for serious trouble if next Spring should be a wet one. **Swabbing at the end of Winter is very advisable.**

Citrus.

The recent heavy rains have resulted in a vigorous growth on all citrus trees. Many trees are showing abundant blossom. The fruit crop as a result of the rain is much improved in appearance. Prices for Valencia Late Oranges and Lemons are well maintained, with a promise of continuance.

FRUIT SHOW AT DIAMOND CREEK.

First quality fruit was shown on the 10th March at the 44th annual show of the Diamond Creek Horticultural Society, which was opened by the Hon. W. Angliss, M.L.C. There were increases in the dog and poultry section, but the fruit entries were less than usual. This fact caused surprise among visitors, as there was a large crop of fruit throughout the district. The champion prize for eight varieties of Apples and four varieties of Pears was won by Mr. G. J. Middleton. Mr. A. Silk, wholesale fruit merchant, of Melbourne, who owns a local orchard, won several prizes, including the prize for the best dish of Delicious Apples. The silver cup presented by Messrs. Williams and Sons, of Alphington, for the best individual collection of fruit to be staged in the form of a pyramid and comprising not less than four varieties of Apples and three of Pears, was won on this occasion by Mr. Pryce May. In the flower section, Messrs. Burns and G. Downey, of Ringwood, were the most successful exhibitors.

SOMERVILLE SHOW.

The 32nd annual show of the Somerville Horticultural Association was opened by the Assistant Minister of Agriculture, Mr. J. H. Cain, on March 14th. The show was a record in every way, the entries totalling 1,063. The fruit was effectively staged, and made an imposing spectacle. The quality was so good the judges had considerable difficulty in awarding the prizes. The well-known exhibitors, Messrs. J. D. and G. A. Grant, won many prizes.

A display of Grapes by Messrs. G. G. Cole and Sons, of the Fernbank Nursery, Tyabb, was greatly admired. A distinctive feature of the show was the packed case exhibits in the competition for school children attending the Department of Agriculture's packing classes. The department is to be congratulated on their excellent work, and the children on their success. The Superintendent of Horticulture was heard to remark that he "would like to have given a prize to the whole darned lot." The prize for the best packed case was awarded to Miss Violet Wilson, with Miss Rose Dennett second. In the class for packed cases under 16 years, Miss Nancy White was first and Miss Elva Hawken second. Under 14 years, Dolly Williams was first and Martha Campbell second.

HARDWOOD CASES

Truck Loads Shooks
Prompt Delivery.

Lowest Quotes
on application to

C. H. MILLER
Timber Agent,
Hardware House,
386 P.O. Place,
C 11552. Melb.

There was a choice display of flowers and vegetables. One Pumpkin weighed 99½ lb. Other features included fruit bottling and jam making, cookery, needlework and domestic arts, etc. The judges were cordially thanked for their services.

In reply to the toast of Parliament, Mr. Cain, M.L.A., commented on the lack of organisation of growers, which was reflected in the only partial success of Peach Week. Growers were apparently divided on the subject of the proposed orchard tax.

The portable lid press shown by the Gerrard Wire Tying Co. created favourable attention.

YARRA GLEN.

The Yarra Glen Horticultural and Agricultural Society held its annual show on Wednesday, the 21st March. Mr. W. H. Everard, M.L.A., declared the show open. The attendance was large, and the entries were of a high standard.

RED HILL SHOW.

Entries were numerous, and the standard high in the Red Hill Show, which was opened on Wednesday, 21st, by Mr. A. Downward, M.L.A. The district is rapidly earning a place in the front of Apple-growing districts, and the Apples shown were really excellent. In the champion class for three packed cases of Apples, distinct varieties, which carried with it the

Irrigation Hose in heavy Finest Scotch Duck

	A	B	C
3-inch	5d.	6d.	7d. per foot.
4-inch	6d.	7d.	8d. " "
5½-inch	7½d.	9d.	10d. " "
7-inch	10d.	12d.	13d. " "
9-inch	14d.	17d.	18d. " "
11-inch	16d.	18d.	19d. " "

HAY STACK COVERS
For Hay and Lucerne Stacks, etc.

	3-Star.	4-Star.
12 x 20	£2 3 0	£3 1 6
12 x 24	2 13 6	3 15 0
18 x 20	3 15 0	4 11 0
18 x 24	4 2 6	5 9 0
18 x 30	5 2 0	6 15 0
21 x 30	5 17 6	7 17 6

We can supply these covers in any length, 3 ft., 6 ft, and 9 ft. wide, suitable for covering drying racks.
Any other size at same rates. Ropes, 3/6 Extra.
Verandah Blinds, Window Blinds, Duck Tarpaulins, Tents, Camp Stretchers and all Classes of Canvas Goods.
Large Stocks of First-class Secondhand Sacks.
Please write for prices and samples.

WYETT MFG. CO. PTY. LTD.
21-23 BELLARINE STREET, GEELONG, VICTORIA.
'Phone 1688.

trophy of the White Service Co., of London, Mr. R. H. Holmes was successful, and Mr. K. Kline second.

The class for the best two cases packed by school children attending the packing classes was won by Frank Field, with E. Warlod second.

In the class for case of Apples, any variety, packed for export, G. Lourissen was awarded first prize, and R. Edwards second. R. H. Holmes won first prize for packed case of Jonathans suitable for export, with E. Bowering second. In the class for upright case, packed suitable for local market conditions, G. Clarke was placed first and N. Prosser second.

In the collection of four varieties of Apples suitable for export, Mr. R. H. Holmes was also the winner, and was awarded the A. E. Chandler trophy. Mr. K. Kline was second. V. Nash was successful in the class for three varieties of dessert Apples, with G. Lourissen second.

Pear entries were not numerous, and the standard in this section was considerably lower than in the Apple section. The principal winner was W. F. Boe, whose exhibits easily stood out above all others.

Vegetables were of high quality, particularly well shown, and formed quite a distinctive feature of the show. The collection of twelve varieties was won by Mrs. R. Edwards, and in the other classes Messrs. J. Wilson, R. Edwards, J. C. Harding, R. Littlejohn and J. C. Williams were amongst the principal prize winners.

The flower exhibits were very pleasing.

U.S. REJECTS SPANISH FRUIT.

Embargo on Importation into U.S.A. of Spanish Grapes and Oranges.

There is an embargo on the importation of Spanish Grapes and Oranges into the United States, on account of the presence of the Mediterranean fruit fly throughout the Almeria districts.

Repeated efforts have been made by the Spanish authorities for the removal of the embargo, but with no avail. A recent decision in U.S.A. was that the prohibition was to continue in force.

Reports from London state that there has been a glut of Spanish Oranges there, and that the trade has been most unprofitable for all concerned.

POTTED PHILOSOPHY.

What you don't know, somebody else is getting paid for knowing.

Don't waste time thinking about your grievances, and don't waste other people's time telling about them.

A business, an organisation, or a cause is bigger than the individuals comprising it, and therefore must have first place.

Many men have found too late that they needed their fellowmen more than their fellowmen needed them.

Arguments are often lost in the ink used to explain them, or in the noise made in expounding them.

If you have genius, work will improve it; if you have none, work will take its place.

If you spend all your time copying you will never create.

Guilt is the real source of sorrow.

Pride is the root bottom of many great mistakes.

People often burn themselves by making things hot for others.

Because you cannot see your own faults it does not mean that you have none.

Believe not each accusing tongue,
As most weak persons do;
But still believe the story wrong,
If it ought not be true.

Things cannot be achieved if they are never attempted.

Solitude is the best nurse of wisdom.

One of the penalties of our foolishness is that someone else always suffers.

One per cent. vanity spoils a hundred per cent. merit.

—"The Fingerpost."

OBITUARY.

In the passing of Mr. W. Calder, Chairman of the Country Roads Board, Australia lost a highminded and capable public servant, and the Red Hill fruitgrowers in particular lost a valued friend.

Through the passing of Mr. Alfred Millis in his 79th year, the fruit industry loses a striking figure. The late Mr. Millis not only organised a successful fruit distributing business in the Western Market, Melbourne, but was always a champion for the growers' interests, and during his busy lifetime he was instrumental in bringing about many improvements in the fruit trade. There are still many who remember his vigorous personality, coupled with his capacity as a public speaker. In his successful efforts to improve the fruit trade, the late Mr. Millis enjoyed the confidence and friendship of a wide circle of Australian fruitgrowers.

After his retirement several years ago, his sons carried on the business, which is now operated under the name of A. Millis and Sons, in the Western Market, Melbourne.

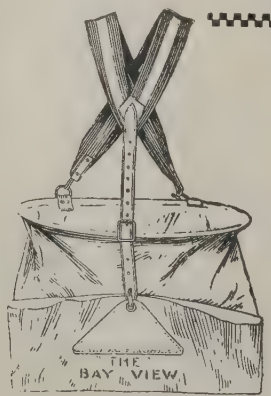
Profitable Poultry.—The merits of Karswood Poultry Spice have been before the public for several years. Appreciations from satisfied users have given the manufacturers considerable satisfaction, and justify their claim as to the benefits accruing from the use of the preparation.

Briggs.—Speaking of resolutions, one of my offspring resolved: I will try to be even more manly this year than I was last.

Griggs.—That's a noble aim. You should feel proud of the boy who made it.

Briggs.—Boy nothing! It was my daughter.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HEATY HOUSE," 499 LITTLE COLLINS ST. MELBOURNE.



"Bay View" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

MAINTAINING ORCHARD FERTILITY.

Importance of Cover Crops.

THE CONTINUED CULTIVATION of any soil has the effect in time of depleting the organic matter—by aerating and warming the soil, conserving its moisture, and making conditions more favourable to decomposition into soluble plant food.

Cultivation is necessary to kill weeds and conserve moisture, and continued clean cultivation, such as is practised in the orchard,

Depletes the Organic Matter

even more quickly than in general farming.

Under continued cultivation, loam or clay loam soils lose their good physical condition with the depletion of organic matter, and the soil runs together quickly with every rain and bakes hard with the heat of Summer before it can be easily cultivated, in some cases getting hard so quickly that further rain is required before cultivation is possible.

Any soil that contains much clay has a tendency to suffer in this way from continued clean cultivation. Sandy soils lose their organic matter even more rapidly than loam or clay soils under cultivation, and the trees suffer on such soil, which heats up, and loses its moisture to a great depth, not only by evaporation, but also by percolation beyond the reach of the feeding roots.

Green Manuring Essential.

Hence the need for soil improvement by means of "green manuring"—manuring, that is, with a crop that has been cultivated with the intention that it shall be turned into the ground.

Bearing in mind that fruit trees have a period of active growth and fruit development in which they must not suffer any lack of moisture, it is evident that any attempt to grow a crop between the trees at a time when it will compete with them for moisture would be inadvisable.

Unless the rainfall in the district is such that more falls during the Summer than is sufficient or good for the trees, a crop for green manuring should not be grown during this period, though, in the opinion of the Department of Agriculture, exceptions may occur in the very heavy rainfall districts on the North Coast of N.S.W.

Neither should a Winter crop be allowed to grow far (if at all) into the Spring, on account of the danger of drying out the ground just when the trees are ready to begin their active growth; though exceptions may be made in districts of cold, wet Springs, such as the heavy rainfall areas of the Southern Highlands (Batlow), or irrigation areas, where the dryness of the soil can be corrected.

In the circumstances, therefore, green manure crops in orchards are mostly Autumn and Winter growing crops like field Peas, Vetches, Tick Beans, etc.

And these may generally be considered to be the best crops in most districts, though some of the annual clovers—Crimson, Berseem (or Egyptian), Annual Bokhara (or Hubam) and Subterranean—have not been given the trial they deserve.

WORKING HORSES SHOULD BE CLIPPED.

THE IMPORTANCE of seasonal clipping of working horses is now so generally recognised that only a small minority of owners fail to give the matter attention. Apart from the fact that cleaning is so very much easier in the case of clipped horses, the benefits to the animal are distinctly pronounced, and cannot be ignored by anyone having the welfare of his horse seriously at heart.

Leaving aside for the moment the humane aspect of the question, the horse must be regarded as an asset, from which, as a business proposition, the most should be got. All authorities seem to emphatically agree that the removal of the thick coat adds to the efficiency of the working horse, and it improves his fitness, reduces the danger of catching colds and other sickness, enables him to work better and thrive on a smaller food supply.

Owners of working horses would do well to not regard too lightly the importance of this matter. The work is comparatively easy to men who are familiar with the handling of horses, and a good machine will amply repay its cost, and will last for years.

Appreciation, "Fruit World."

Am forwarding cheque for subscription for two years; your paper is much valued, as it gives news from all districts.—W. Edge, Yenda, N.S.W.

FOR

SPRAYING, LIMEWASHING and DISINFECTING

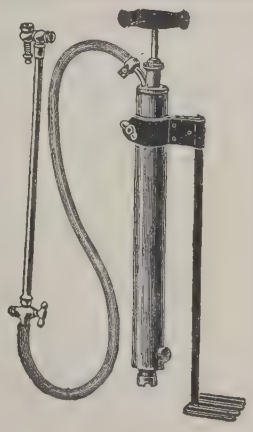
RELIABLE AND EFFICIENT MACHINES ARE ESSENTIAL

Before Placing Your Order ASK A FRIEND

WHO HAS USED A

VERMOREL "ECLAIR" SPRAYER

TO TELL YOU HIS OPINION OF IT
ACTUAL USE IS THE BEST TEST



The types made include the following:—

HAND SPRAYERS
PNEUMATIC HAND SPRAYERS
KNAPSACK SPRAYERS
PNEUMATIC KNAPSACK SPRAYERS
BUCKET PUMPS
BUCKET SPRAYERS
SINGLE WHEELED SPRAYERS
TWO WHEELED HAND POWER SPRAYER
high pressure model (220 lbs. per square inch)
CART SPRAYERS
AUTOMATIC HORSE DRAWN SPRAYERS
POWDER BELLOWS
KNAPSACK POWDER SPRAYERS
AUTOMATIC HORSE DRAWN POWDER SPRAYERS
3 H.P. MOTOR SPRAY OUTFITS

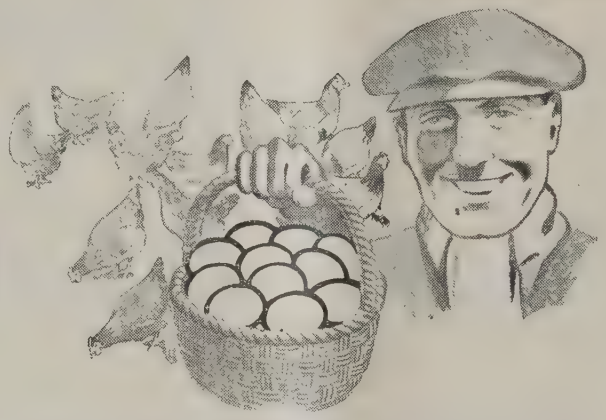
LIQUID CAPACITIES 1¼ pints to 88 gallons. PRICES FROM 2/9 to £80 each

The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants.

Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—

COOPER, PEGLER & CO. LTD., 244 CHRISTOPHER STREET, LONDON, E.C.2.

8 or 9 Eggs daily
from 10 Fowls



"This is the daily result while feeding with 'Karswood'
2 to 3 Eggs the daily average when fowls did not have 'Karswood.'"

HERE is the experience of a "backyarder." While she fed her 10 Leghorns with Karswood Poultry Spice, the daily average of eggs was 8 to 9. This wonderful average was maintained for five months. In November, thinking it was not necessary to continue the Karswood feeding, it was left off. Result—the average was quickly reduced to two or three eggs a day. Commencing again with Karswood the daily average was soon back to eight. In view of this experience isn't it at least worth while to give Karswood a trial? One 1/– packet is sufficient for 20 birds for 16 days. Purchase a packet to-day and bring *your* fowl's average up to that quoted above. Karswood is a natural food-tonic. It doesn't force but accomplishes its purpose gradually and surely by toning up the fowls' system and by assisting in the development of the egg-seeds. Without this assistance, hundreds of the egg-seeds will be absorbed in order to meet the demands created by the daily wear and tear of life and by the strain of previous egg-laying. So satisfied is the writer of the following testimonial that in her own words she stated :—

"Never again will fowls of mine be without 'Karswood'"

Dear Sirs,

I have ten white Leghorn hens. I give them Karswood Spice every morning. I keep a record of the eggs they lay each day. For five months from May 29th until September 29th I got 832 eggs. This month being hot I decided to leave off the Karswood Spice—the eggs dropped from eight and nine a day to two and three eggs a day, so I started using Karswood again this week and have had eight eggs each day since. I will conclude by saying never again will fowls of mine miss their Karswood Spice.

Yours faithfully,
(Sgd.) Mrs. F. R. WADDLETON.
Terowie, S.A.

"Have always used 'Karswood"

Yet another letter from this enthusiastic user of "Karswood" Poultry Spice :—

Dear Sirs,

We have kept fowls for the past four years and have always used Karswood Spice, our fowl house being the envy of the neighbourhood, having only ten hens and getting as many as six eggs in one day, the average for last two months being 224. We have recommended Karswood to our neighbours, all of whom have thanked us.

Yours faithfully,
(Signed) F. R. WADDLETON.

Make this Test

Go to your local grocer, storekeeper, or produce dealer. Get a 1/– packet of Karswood Poultry Spice, and give it to half-a-dozen of your birds in accordance with the directions on the packet. Do not expect immediate results; Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Note the Economy

1/– packet supplies 20 hens for 16 days.
2/– packet supplies 20 hens for 32 day .
13/– (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable at all wholesalers and stores at the following standard retail prices :—

½lb. packet.	Price, 1/–		
1lb. packet.	Price, 2/–	7lb. tin	„ 13/–
14lb. tin	„ 25/	28lb. tin ..	„ 48/–

1/M/28

POULTRY NOTES.

WINTER will soon be here, and housing. Beware of draughts with it the necessity of proper and damp. Cement floors, with a coating of tar are hard to beat.

See that the run always faces east, and is protected from the wind, this is important.

The feeding of an unbalanced ration to adult stock, has a tendency to produce liver disease. Maize should be given only in moderation. Green feed should not be stinted, and should be given at mid-day. Give meat-scraps or soup, in the mash, twice a week.

To combat lice, give opportunity for plenty of dust baths, and keep nests and perches scrupulously clean. The use of a phenyle solution on the perches, and insectibane in the nests, should do this.

Many poultrymen will now be considering mating up the breeding pens with a view to early hatching. It must be remembered that only about 25 per cent. of cockerels in the average poultry farm are really good breeders.

To ensure that no bird of excellent breeding be discarded, it is important that a carefully worked out plan be used.

Many breeders have their own plans for selecting their male birds, but there are a few requirements that should be observed by all breeders.

Above all, consider vigor and vitality as being the best of all qualities in your birds. It is a serious mistake to use birds of good color pattern but of poor vigor as breeders. A vigorous cockerel should have a short, well-curved beak, a broad deep head, and a full face. The eyes should be prominent, clear and bright. The comb and wattles should be deep red in color, indicating excellent blood circulation. Red should also show on the outside of the bird's shanks. This is one of the best indications of vigor, and efficient digestion.

Shell Grit.

Qualities that are Essential.

The importance of good shell grit, and its bearing upon egg production and the quality of shells of the eggs is touched on by the Poultry Expert of the N.S.W. Department of Agriculture in current notes. Unfortunately, says the writer, satisfactory grit is not always available, and in some cases there appears to be a lack of knowledge as to what

Constitutes Suitable Grit,

and one frequently sees the receptacles in the pens filled with grit which the birds do not eat, or from which, at any rate, they do not obtain sufficient for their requirements. In this regard, fine material and very large shells are equally bad, and there are the blue shells which it will be found are always rejected by the birds. Another class of grit which is not satisfactory is that containing mostly water-worn shells.

The ideal grit is that which is sharp, even in size, not larger on the average than ordinary cracked maize, and somewhat soft, rather than very hard. One of the main functions of shell grit is to supply

Shell-forming Material,

and therefore that containing the greatest percentage of carbonate of lime is the best. The fairly soft class of shells is the most satisfactory, as the carbonate of lime is more readily assimilated. This is why oyster shell is often introduced, and but for the cost would be more universally used.

Where fine grit is used, care is necessary to replenish the supply in the pens as soon as the larger material is eaten; otherwise the small shell gets settled down into a solid mass, and the birds are not able to obtain as much as they require.

This results in a lowered egg yield, and frequently in thin-shelled eggs. It is important also that the grit vessels should not be allowed to become completely empty, as is often observed on farms, because where this happens the birds have probably been short of their requirements for some days, which would have the same result as mentioned above.

Another matter which might be referred to while dealing with this subject is the practice of using shell grit in the nests and making this the only source of supply for the hens.

Where this is done it will be found that after the grit has been in the nests for a short time, the birds refuse to eat much of it on account of it becoming dirty.

A separate supply of grit should always be provided.

BEE KEEPING.

(By H. Willoughby Lance.)

Bees and the Orchard.

ORCHARDISTS do not always recognise the importance of the bee-keeping industry in relation to their own.

It has, however, been proved over and over again that to have bees in or near an orchard at flowering time means more and better fruit. In America this is realised to such an extent that some orchardists who will not trouble to keep bees, and have none in the neighborhood, will contract with a bee-keeper to place a number of hives in their orchard at flowering time to ensure good pollination.

Experiments conducted by the University of California proved conclusively the value of the honey bee for pollination of fruit trees. The experiments were made on prune trees entirely enclosed under mosquito netting, so as to exclude or enclose pollen-carrying insects as desired.

Without going into full details of the experiments, which covered a large field, the following facts from the experiment on the French Prune will prove of interest to fruitgrowers.

A French Prune tree was enclosed, and all pollen-carrying insects excluded therefrom. A similar tree was enclosed, and a hive of bees placed therein for six days while the tree was blossoming.

The setting of fruit of these trees was compared with that of the orchard generally, the method being to count and mark about a thousand blossoms on each tree, then later to count the matured fruit, with the following results:—

	1916.	1917.
Set of tree from which bees were excluded ..	1.04	0.43
Average set of orchard, unenclosed	3.59	13.2
Set of tree with bees enclosed	18.05	19.00

The difference between the average set for 1916 and that of 1917 was accounted for by the fact that in 1917 a number of colonies of bees had been placed in the orchard.

The following is an extract from the summary of results:—"The work of the year just passed again shows the value of bees as pollen-carrying agents. Reports from a number of growers who kept bees in their orchards during the blossoming season agree with the results obtained experimentally on the Sorosis Ranch. In every case a substantial increase was reported."

At Sorosis the increase on the French Prune trees, due to the use of bees, was remarkable. The insects are at least largely responsible for the increase from 3.6 per cent. in 1916 to 13.2 per cent. in 1917, when there were 115 colonies of bees in a 180-acre orchard.

Even more striking results were obtained from the trees which were under the tents. Here the bees and similar insects were excluded and confined, and in the latter case forced to work several days on only the blossoms of the tree under experiment. The trees from which the bees were excluded, though given the same cultural treatment as the check trees, failed to set even a fair crop. The data point to the necessity of some agency for distributing pollen, and shows the beneficial results from the use of such an agency.

Although the marked increase obtained in the experiment could not be obtained in a commercial orchard, because of the impossibility of confining bees to a certain section, still a noticeable benefit should result from the keeping of bees in conjunction with a Prune orchard."

In addition to being so necessary to the orchardist to ensure a good crop of fruit, he should also obtain a surplus of honey for his own consumption, at no cost beyond the capital outlay for the bees and hives, and what better food can be given his children than Nature's sweet? If also there is suitable bee flora in the surrounding country he will be able to obtain more than sufficient for his own needs, and the honey harvest will mean a welcome addition to his income.—W.A. "Journal of Agriculture."

FRUIT CANS BETTER THAN GLASS JARS.

In a letter to the "Morning Post," London, Dr. J. C. Ashton, a well-known physician, advises the use of canned fruits to that in glass containers. He states:—

"Many housewives prefer food, particularly fruit, preserved in glass containers to that preserved in tins. They believe that there is a danger of poisoning from the structure of the tin. Actually the reverse is the case. There are possible dangers in glass-preserved fruit which to all intents and purposes are non-existent in the case of tinned fruit. And this is the reason:—

Ordinary cheap glass jars contain minute air bubbles, which may harbour both lead and arsenic. These air bubbles are very easily broken, and, in consequence minute particles of glass get into the fruit. These, combined with the lead and arsenic, which two independent investigators recently discovered in 60 per cent. of the cheap green glass vessels they examined, may easily account for the gastric disorders which from time to time mystify the medical profession.

But the chief advantage of the tin container over the glass jar is that tin can stand the heat necessary to sterilise the food effectively. Glass, on the other hand, does not, and today the processes employed in the up-to-date container after its expulsion make tinned fruit as decay-resisting and germ-free as is humanly possible."

Bee Attitude.

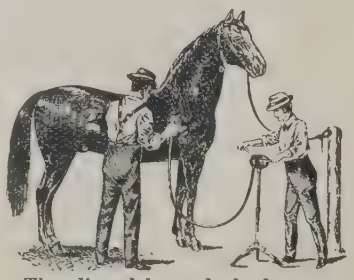
Sunday School Teacher: Now, class, what is a beatitude?

Tommy Jones: Please Miss, it means that if you go near a beehive, the bees will show their attitude towards you.

Clipped Horses are Less Subject to Pneumonia—Coughs—Influenza.

Veterinarians are emphatic in stating so, and that clipping of the thick winter coat is essential to good health for horses in heavy work. The coat holds the sweat, and colds, coughs, pneumonia and rheumatism are the result. The clipped horse dries off quickly, and his feed goes to producing energy instead of nourishing superfluous hair.

The Stewart is the world's standard clipping machine. It has dust-proof case enclosing solid steel gears, so arranged as to give lightning speed on the cutting plates from an easy motion of the crank handle. Ball bearings are placed at high speed bearing points to reduce friction and wear.



The clipped horse looks better, because he feels better.

Stewart

Horse Clipping Machine

Price **57/6** Freight Extra. Weight 30lbs.

Obtainable from

All Hardware Dealers

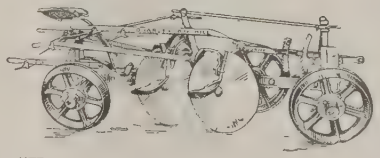
If unable to secure, please write to Box 4318, G.P.O., Melbourne.

"HARVEY" IMPLEMENTS ENSURE SATISFACTION

THE SECRET OF GOOD CULTIVATION IS EFFICIENT MACHINERY

"Harvey" Single Furrow Orchard Plow.

These Implements will plow on or off right to the Butts of the Trees.



"Harvey" Heavy Furrow Orchard Disc Plow.

Subsoil Plow.

Every Grower knows the value of Sub-soiling. By its use the production of arid lands and worn-out plantations are increased.
Perfect regulation of depth obtained.

The "Harvey" Patent Orchard and Farm Harness eliminates the havoc done by chains and swinging-bars. No Broken Branches. No Barked Trees. No loose chains to become entangled in the horse's legs when turning. Adjustable to suit a low or high draught implement. **You cannot afford to be without it.**

"Harvey" Patent Orchard Harness.

"ELLISIZE" YOUR FRUIT with the ELLIS GRADER

APPLES, ORANGES, POTATOES, ONIONS
and all classes of other Fruits
PERFECT GRADING NO BRUISING

It is the cheapest-priced Sizer offered, and is so simple that it is the cheapest in the long run. Can be removed from place to place in your orchard wherever you desire to grade.

The Grader with only ONE moving element

One simple adjustment will give this variation in size:—4-5 grades, 7-8 grades.
Write for particulars.

PRICE: Grader only £16. with Table & Hopper £21 10

We Manufacture a Full Range of Special Tractor Orchard Implements

Write for Catalogue, stating either Tractor or Horse Drawn Implements.

D. HARVEY, ORCHARD IMPLEMENT MAKER
BOX HILL, MELBOURNE, AUST.

SHOW ROOMS, 440 ELIZABETH STREET, MELBOURNE. AGENTS ALL STATES.

SAVE THE YELLOW BOX.

THE SERIOUS DANGER which threatens the bee-keeping industry through the destruction of the yellow box tree was brought before the recent Apiarists' Conference by Mr. V. R. Davey, the Apiarists' Association's representative on the Forest League, who stated that yellow box, the mainstay and national tree of the Australian bee-keeping, was being neglected and allowed to be cut out without effective provision being made for safeguarding the honey industry by replanting.

The objects of the Forest League included the maintenance of present forest reserves, the setting apart of further areas for forest reserves, the reafforestation of denuded areas, tree planting on main roads and waste areas, the protection of forests.

National Forest Areas

were considerably below the safe ratio in relation to settled areas, and experts contended that at the rate of timber consumption and denudation by fire and other causes a timber famine was likely within the next twenty years. The Forest League wanted the forests brought back to a safe ratio. He had heard it said that bee-keepers were the best policemen of the forests. Regarding the tree planting of main roads, such as Geelong-road, he could not understand the proposal to have 60 per cent. of the trees deciduous. Nor could he understand the banning of the sugar gum. The trees selected should be almost

Exclusively Australian Trees,

including the beautiful flowering gums. The sugar gum, if attended to properly in its first year after planting, was a suitable tree, and dense and shapely foliage. It could easily be prevented from growing up the long, gaunt tree objected to by some of its critics. It had a wealth of bloom with which it was covered for three months of the year, and it gave off a pleasing perfume. A tree conscience was but one remove from a forest conscience, which it was the desire of the league to foster and encourage.

Successful Deputation.

Following the conference, a deputation on Friday afternoon waited on the Secretary of the Forestry Commission (Mr. W. J. Code), to urge that the yellow box be protected for the benefit of apiarists.

Mr. Morgan said the yellow box (Eucalyptus meliodora) was the apiarists' best tree, giving the highest yield in quantity as well as quality. It thrived on poor auriferous country, but was disappearing so fast that it was felt some of the officers of the department did not recognise its great revenue-producing value. If retained, the tree would produce wealth in perpetuity. A little revenue was being derived from the limbs of the trees, whilst tens of thousands of pounds were lost in obtaining this small benefit.

Mr. Renshaw complained that in the Dunolly district many acres of yellow box were being ringbarked.

Mr. Code, in reply, said that all the yellow box trees should be kept for apiarists. In fact, he had given instructions for this course to be followed and would immediately send out another circular to this effect.

Mr. Beuhne asked that the lessees of burnt-out bee areas should have the first chance of renewing same when the scrub grew again and came into bearing.

Mr. Code said it was the practice to follow this procedure, as the department believed the bee-keepers were of great value in the preservation of forest trees.

It's DRY and RUNS FREELY

——NO LUMPS

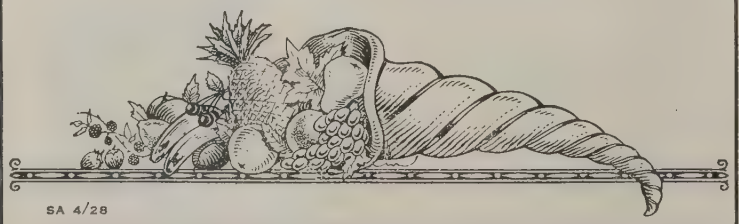
AN IMPROVEMENT has recently been made in the condition of SULPHATE OF AMMONIA, a dry, free-running, non-caking "neutral" Sulphate of Ammonia now being available to fertiliser users generally.

It contains no lumps, and will be found both more convenient to apply and more economical to use than the Sulphate of Ammonia supplied in the past.

All the proved virtues of ordinary Sulphate of Ammonia are present in this "neutral" quality, the result of the improvement being that an already good fertiliser is made much more convenient to *use*, and, consequently, much more economical.

Enquiries to

THE METROPOLITAN GAS CO.,
196 Flinders Street, Melbourne.



SA 4/28

SELF-BOILED LIME SULPHUR.

In answer to a query in the "N.Z. Journal of Agriculture," the Horticulture Division supplies the following instructions:—

Self-boiled lime-sulphur (8-8-50) is prepared by placing 8 lbs. flowers of sulphur and 8 lb. rock lime in a barrel and adding water gradually, keeping the ingredients wet, but not submerged. Stir occasionally. When thoroughly slaked, dilute at once up to 50 gallons of water, and apply the spray.

FIGHTING INSECT PESTS IN THE ORCHARD.

Light-brown Apple Moth.

The small green active caterpillars of the above-named moth are still to be found in fair numbers in orchards, where they are doing some damage to Apples. It is advisable to spray at once with arsenate of lead, 1 in 25.

Looper Caterpillars.

Loopers have been particularly numerous recently in orchards, and are attacking Apples. They also do considerable damage to the fruit spurs of fruit trees. Spray same as recommended for Light-brown Apple Moth.

Grasshoppers.

Grasshoppers are in plague numbers in parts of N.S.W., and a fair number are commencing to appear in Victoria. They are most destructive in orchards, and will eat off every leaf and fruit spur from trees. They also eat the bark, and cause no end of damage. Thoroughly spray the trees with arsenate of lead, 1 in 25.

Codlin Moth.

The caterpillars of this moth are pupating (turning into the chrysalid form) under the loose bark or hessian bandages. Remove all loose bark and destroy same by burning. Hessian bandages should be removed at least once a fortnight at the present time, then dipped into boiling water and replaced on trees. Pick up and destroy all grub-infested fruit.

Treatment for Packing Rooms.

When the Apple season is finished, the crevices and floors of the packing rooms or sheds should be thoroughly sprayed with "Flytox" or other chemicals to destroy the hibernating grubs. Fruit cases should also be treated. These could be dipped into a tank of boiling water, which is very effective in destroying codlin grubs and chrysalids.

Elephant Beetle of Orange and Lemon.

See "The Fruit World," February 1st, 1928, p. 72.

Tiger Moths.

The caterpillars of these moths measure, when fully grown, about an inch in length, brown and hairy in appearance. They have found their way into orchards, and are now often seen on Apple trees. They are to be found from September till May. When observed, spray with arsenate of lead.

Apple Pinara Moth.

The large greyish caterpillars of this moth are rather numerous this season. They are very destructive to the foliage and fruit spurs of Apple trees. Occasionally they will destroy young Apples. Spray with arsenate of lead, 1 in 25.

Red Spider and Bryobia Mite.

These mites have been particularly bad this season, owing to the hot weather, the leaves of Apples and other fruit trees, in many districts, being discoloured by them. When the Apple leaves have fallen the trees should receive a thorough spraying with red oil or lime sulphur. This treatment will destroy the eggs in the crevices and on the bark and fruit spurs.

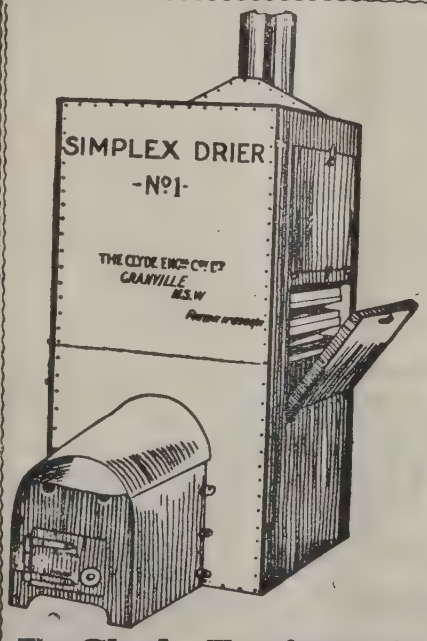
Poles used for propping up the Apple boughs should also be treated (boiling water poured over them is recommended), before being used again.

Painted Apple Moth.

The tufted caterpillars of this moth are still in fair numbers in orchards. When observed, it is advisable to spray with arsenate of lead, 1 in 25. When trees are bare of leaves, a good spraying with red oil or lime sulphur will destroy the eggs of this very destructive insect.

Woolly Aphis.

These destructive insects are still fairly plentiful in orchards where no parasites (Aphelinus) have been liberated. When the leaves commence to fall, the first spray should be applied. Use red oil one gallon to 25 gallons of water. When Aphids are present in Summer, nicotine sulphate, blackleaf 40, or benzole emulsion should be used.



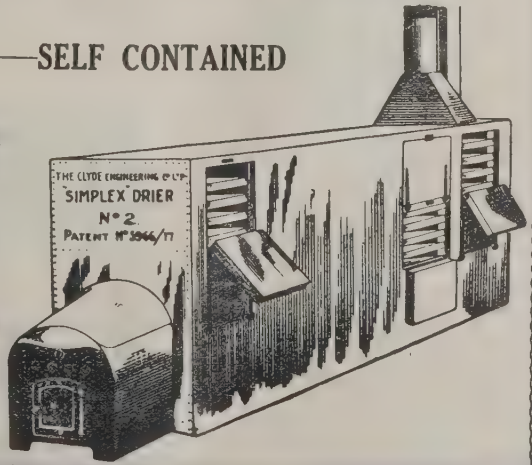
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ld.
GRANVILLE, N.S.W.

BUDS AND GRAFTS.

Directions for Their After Care.

SHOOTS that were budded the previous growing period should have been cut back to start the inserted buds into growth when the natural buds of the stock showed signs of activity in the Spring. It is generally far better that this cut should be made between 2 and 3 in. above the inserted bud, leaving a stub to which the tender shoot from the inserted bud can be tied as it extends, thus lessening the chances of breakage from wind. Apart from tying, the projecting stub often offers protection to the tender shoots from birds resting or the brushing of persons or horses when passing.

The buds on the stub above the inserted bud will start into growth, and if not attended to will probably sap the growth from the inserted bud. The way of dealing with these buds which entails the least work is to destroy them by picking them out with the thumbnail or secateurs when cutting back the shoots in the Spring, and if one cannot depend on finding time to pay attention to the buds later probably this is the best plan. However, the inserted buds appear to come away with a healthier growth if the buds in the stub above are allowed to start. When this is done it is necessary to pinch the growth from them later to prevent the growth from the inserted bud being sapped. The healthier growth from the inserted bud is probably due to the buds above drawing the sap and later providing foliage which assists in elaborating the raw sap. After the growth from the inserted bud has grown out a few inches and has an established appearance, the growths from the stub above can be brushed off to avoid further attention.

Growths Below the Inserted Buds.

Besides the growth from the buds on the stubs, many growths will start from the stock below the inserted buds, or from below grafts that have been inserted earlier in the Spring of the current season. On nursery stocks these growths are generally better rubbed off on sight, but on established trees that have been worked over with another variety it is far better to allow some of the growths from below the inserted buds or grafts to remain. However, attention is required, or these growths may sap the growths from the buds or grafts.

Some of the shoots from below the buds or grafts will at once show great vigour, and are better rubbed off at once, as they will be a constant menace; the weaker shoots are better allowed to remain, but should be inspected occasionally, and, if any shoot strongly, should be pinched or slashed back to prevent them sapping the growth from the inserted buds or grafts.

The advantages of leaving some growth on the stumps of worked-over trees below the buds or grafts is threefold. In the first place, these growths provide some foliage to assist in the elaboration of the raw sap. It must be remembered that by cutting back the main limbs for grafting or budding the major part of the foliage is lost, and the roots thereby suffer partial starvation till sufficient growth is made to restore the balance between root and top. Secondly, the growth on the stumps shades the bark from the sun and promotes sap circulation, which prevents the sun from scalding the bark. Thirdly, the extra growth assists in protecting the tender new shoots from the inserted buds or grafts from breakages by wind.

Sometimes when working over established trees some limbs are left unworked; where this has been done it is often necessary to check their growth during the following growing season, or they will sap the growth from the buds or grafts too much.

The shoots from the inserted bud or graft should be interfered with as little as possible during the growing season, but when they make rapid growth it is necessary to pinch them back to prevent them being blown out by winds. For a year or two after they start they must also be cut back rather severely when pruning in the Winter to prevent too rapid extension till they are fairly established.

Superfluous Inserted Buds.

Superfluous inserted buds should not be removed for the first two or three years till those selected for framing the tree are well established, and there is reasonable certainty that they will not be blown out or lost by other mishaps. Likewise the superfluous scions on a stump should be retained till the callous has spread well over, and all round the cut edge of the stump. If only one scion is left on a thick stump the sap will not be drawn on the opposite side, and the bark will often die away on that side. The extra scions round the stump keep the sap moving on all sides and hasten the callousing over of the wound.

Though the delay in cutting them out often creates a fairly big wound when the time comes for the operation to be performed, such wounds are surrounded by the new callous, and the liberal flow of sap causes them to heal over rapidly. As the growth from buds or grafts on reworked established trees often develops very rapidly, there is danger during the first few years, until the callous has crept round, of their being broken out. For this reason it is wise to brace the new limbs with lashing or wires.—N.S.W. Department of Agriculture Notes.

STANDARDISATION.

No representative grower or shipper will deny that standardisation has been the salvation of the fresh fruit business in California. There are those who believe that canned fruits of inferior quality, which in the past have been sold under misleading labels, have had much to do with limiting consumption of this commodity and are responsible in a way for at least some of the canners' carry-over from last year.—Monthly Bulletin, California Dept. of Agriculture.

Appreciated.

Please find enclosed cheque for subscription until June, 1930. I continue to find not only a great deal of interesting, but also instructive matter in the "Fruit World." Wishing you every success.—(Signed) A. W. Thiel, Capel's Crossing, W.A.

GRUBBING
Thousands in Use
It earns its Famous LOW PRICE in a Few Days
Write for Catalogue
WITH A
"DIGGER" WINCH
A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days
QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

AUSTRAL OTIS-ANDEBAR CANNERY EQUIPMENT

Pty. Ltd.

Hanna Street, South Melbourne

Telephone : M 1257. 3 lines. *Box 3 P.O. Sth. Melbourne*

Sole Agents in Victoria and New South Wales for

J. B. FORD Coy., U.S.A.
INDUSTRIAL ALKALIES

CANNERS ALKALI USED THIS SEASON BY:

Ardmona Fruit Preserving Co., Mooroopna.
Kyabram Fruit Preserving Co., Kyabram.
State Government Cannery, Leeton, N.S.W.
Australian Jam Coy., S. Yarra.
Rosella Preserving Co., Richmond.
Studley Preserving Co., Collingwood.
H. M. Leggo & Co., Melbourne, and Bendigo.

PLEASE SEND ENQUIRIES.

Clipped Horses are Less Subject to Pneumonia—Coughs—Influenza.

Veterinarians are emphatic in stating so, and that clipping of the thick winter coat is essential to good health for horses in heavy work. The coat holds the sweat, and colds, coughs, pneumonia and rheumatism are the result. The clipped horse dries off quickly, and his feed goes to producing energy instead of nourishing superfluous hair.

The Stewart is the world's standard clipping machine. It has dust-proof case enclosing solid steel gears, so arranged as to give lightning speed on the cutting plates from an easy motion of the crank handle. Ball bearings are placed at high speed bearing points to reduce friction and wear.

The clipped horse looks better, because he feels better.

Stewart

Horse Clipping Machine

Price **57/6** Freight Extra. Weight 30lbs.

Obtainable from

All Hardware Dealers

If unable to secure, please write to Box 4318, G.P.O., Melbourne.

Spitalfields Market, LONDON

(Owned and controlled by the Corporation of the City of London)

Supplies a Population of 9,000,000

Nearest Market to

THE PORT OF LONDON
DOCKS AND WHARVES

with Railway connections to all parts of

THE UNITED KINGDOM

EXCEPTIONAL FACILITIES FOR
RAPID HANDLING
ALL CLASSES OF FRUIT AND VEGETABLES
HOME GROWN OR IMPORTED

— Extensions now in hand will make this the —

LARGEST FRUIT & VEGETABLE MARKET IN GREAT BRITAIN

BRITISH AND COLONIAL GROWERS CONSIGN TO
SPITALFIELDS MARKET

General Information can be obtained from:—
SUPERINTENDENT, SPITALFIELDS MARKET, LONDON, E.1.

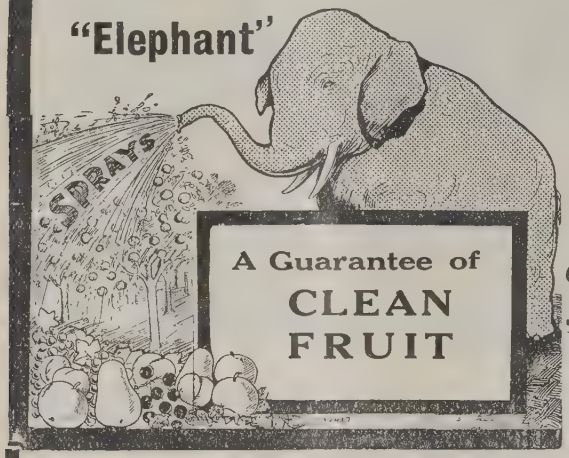
Are You a
"Garden Lover"?
If so
Write for Sample Copy
to
Garden Lover
Bank House,
Bank Place,
Melbourne

GRUBBING
WITH A
"DIGGER" WINCH
A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days
Thousands in Use
It earns its Famous LOW PRICE in a Few Days
Write for Catalogue
QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

SUPPORT CO-OPERATION
By Consigning your FRUIT to the
Producers' Distributing Society Ltd.
(Late Coastal Farmers' Co-operative Society Ltd.)
Agents for
"BLACK LEAF 40"
and all Orchard Requirements
Melbourne Sydney
Newcastle Hobart
Launceston Devonport

Here at Last!
Patterson's Clensel
A British Product. Non-poisonous, non-injurious to the most delicate blooms.
Can be sprayed at any time of the year. Easily mixed; easily prepared. Will eradicate thrip, red spider, green fly (aphis), and other garden pests.
Obtainable from all Florists, Seedsmen and Nurserymen. Advise us if you cannot get it in your district.
CLENSEL PTY. LTD., 184 Queen Street
C 2657. MELBOURNE

Fruchthof-Bremen
Fruchthandel Gesellschaft
Scipio & Fischer
Fruchthof BREMEN Germany
Cable Address: "Orange" Bremen . . . Established 1902
AUSTRALIAN REPRESENTATIVES:
Victoria: The International Fruit & Mercantile Co., 410-416 Flinders Lane, Melbourne.
West Aust.: Messrs. Paterson & Co., Ltd., Perth.
Tasmania: Messrs. E. R. Cottier & Co., Hobart.



ORCHARDISTS

Spraying is essential, and your best Insurance. Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand

Sprays Only

NOW IS THE TIME TO ORDER YOUR SPRAYS.

Use "Elephant" Brand

Prepared Red Oil

Manufactured from a heavy bodied mineral oil, combined with ingredients only necessary to bring about a perfect emulsion when mixed with cold water.

THIS OIL CONTAINS 85% PURE MINERAL OIL.

also

Prepared Crude Oil

ORDER NOW.

NICOTINE SULPHATE (Black Leaf 40)	BORDEAUX POWDER	ARSENATE OF LEAD (Paste and Powder)
LIME SULPHUR	BORDEAUX MIXTURE SOFT SOAP	BLUESTONE

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of "Elephant" Brand Sprays

Manufacturing Chemists, MADDEN GROVE, BURNLEY, E.1., MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for May, 1928.

Illustrations.

Lemon Trees in N.S.W. 176
Railway Fruit Drink Stands 177–178
Strawberries, "Melba" Variety 180
Mount Dandenong Views . . 190

Subjects.

Answers to Correspondents 180
Assisting the Fruit Industry 177–178
Berry-growing Problems; Research Into 190
Beekeeping Notes 197–198
Bird Friends . . . . . xviii.
Canned Fruits 195
Citrus News and Notes . . 191
Dried Fruits Department . . 183
Editorial Chats 179
Fruit Tree Stocks 189
Fruitgrowing in New Zealand . . . . . xvii.
Fruit Trees, Planting 181–182
Gardening Notes . . . . . xviii.
Goulburn Valley (Vic.) Reports 200–203
Insect Pests, Fighting . . . . xvi.
Insect Friends of Horticulture 193
Lemons, Profitable 176
Manuring of Fruit Trees . . 173
Manuring for Crop Improvement 171–172–173
Markets: British, Foreign, & Australasian . . . . . 208-xv.
New South Wales News and Notes 184
New Zealand Notes . . . . . 193–xvii.
News in Brief 176
Orchard Heating in U.S.A. 207
Plant Propagation 174–175–176
Planting Fruit Trees 181–182
Poultry Notes 197
Queensland News and Notes 187–188
Red Spider 193
Strawberries, New Varieties of 180
Tasmania, News and Notes 185–186
Victoria: Shows, Shepparton; News and Notes 200–204
Vegetable Culture 205
Vegetable Planting Table for May 205
West Australia 199

INDEX TO ADVERTISERS.

Books, Publications—
"Garden Lover," Bank House, Bank Place, Melbourne, p. xxv., xiii.
"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii.

Canning Machines—
Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. xi.
Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—
Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Clipping Machines—
"Stewart," Box 4318, G.P.O., Melbourne, p. xi.

Dehydration—
"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. 202.

Dusting Machines—
Atomol Dusts Ltd., Dumphries Place, Adelaide, p. xx.

Fruit Buyers—
Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xxi.

Fruit Tree Suppliers—
Brunning, John, and Sons, Somerville, p. 170.
Ferguson, F., & Son, Hurstville, N.S.W., p. 198.
Lawrey, J. W., Yarra Glen, Vic., p. 201.
C. A. Nobelius & Sons, Emerald, Vic., p. 192.
Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 152.
Two Bays Nurseries, Mooroduc, Vic., p. xxii.
Walker, Frank, 110 Brisbane Street, Launceston, Tas., p. xviii.

Fruit Graders—
"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood Vic., p. 202.
"Ellis," D. Harvey, Whitehorse Road, Box Hill, p. xv.

Fruit Picking Bag—
The "Bay View," F. R. Mellor, 440 Elizabeth St., Melbourne, p. 207.

Irrigation Hose and Canvas Goods.—
Wyett Mfg. Co. Pty. Ltd., Geelong, Vic., p. 207.

Manures, Fertilisers, &c.—
Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. xvi.
Bone Dust, P. Fitzgerald & Sons, Warragul Rd., Oakleigh, Vic., p. 173.
"Nitrophoska," "Urea," Dyes & Chemicals (Aust.) Ltd., Sydney & Melbourne, cover i.

Orchard Ploughs, Cultivators, &c.—
D. Harvey, Box Hill, Melbourne, p. 194.

Orchard Requisites—
McPherson's Pty. Ltd., 582 Collins St., Melbourne, Vic., p. xxi.

Patent Attorney.—
Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. 203.

Poultry—
Karswood Poultry Spice, Agents all States, p. 196.

Refrigerating Machinery—
Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—
Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xix.

Spray and Dusting Material—
"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. iv.
"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.
"Elephant" Brand, Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. xiv.
"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.
"Clensel," Clensel Pty. Ltd., 184 Queen St., Melbourne, p. xiii.
Dusting Powders, Atomol Dusts Ltd., Dumphries Place, Adelaide, p. xx.
"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.
"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. xiii.
"Black Leaf 40," Producers' Distributing Soc. Ltd., Sydney, p. 198.
Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. xxii.
"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 198.
"Volck," H. C. Pannifex & Co., 26 Market St., Melbourne, C.1, p. xvii.
"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 199.

Spray Pumps and Guns—
"Bave-U" Power Sprayer, Russell & Co., Box Hill, cover ii.
604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. v.
Spray Pumps, etc., Cooper Pegler & Co. Ltd., 24d, Christopher St., London, E.C.2, p. 204.

Strapping Fruit Cases—
Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.
"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. xx.

Transport—
London and N. E. Railway, Burns, Philp & Co., agents, p. ix.

Tree and Stump Pullers—
Trewhella Bros., Trentham, Victoria.
Stumping Jacks, etc., p. ix.
"Digger," Quick Manufacturing Co., 75 Pender St., Thornbury, p. xi.

Fruit Trees

for 1928 Planting

APPLES	QUINCES	CHESTNUTS	OLIVES
PEARS	FIGS	GOOSEBERRIES	GUAVAS
PLUMS	CHERRIES	CURRANTS	BRAMBLES
PRUNES	WALNUTS	RASPBERRIES	LOQUATS
ALMONDS	ORANGES	NUTS	PERSIMMONS
APRICOTS	LEMONS	MEDLARS	VINES
PEACHES	MANDARINS	POMEGRANATES	STRAWBERRIES
NECTARINES	MULBERRIES	PASSIONS	RHUBARB
			LOGANBERRIES

All Leading Varieties from—

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 1866

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is **8/6.** All other places, **10/6,** post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices where copies and full particulars are obtainable) are as follows:—

HEAD OFFICE:

Bank House, Bank Place, Melbourne, Victoria

Representatives in all States and New Zealand.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

American Office: S. D. McFadden, Pacific Bldgs., Market Street, San Francisco, Cal., U.S.A.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

Two Kinds of People.

There are two kinds of people on earth to-day;
Just two kinds of people, no more, I say.
Not the good and the bad, for 'tis well understood
The good are half bad and the bad are half good.
Not the happy and sad, for the swift-flying years
Bring each man his laughter and each man his tears.
Not the rich and the poor, for to count a man's wealth
You must first know the state of his conscience and health.
Not the humble and proud, for in life's busy span,
Who puts on vain airs is not counted a man.
No! the two kinds of people on earth I mean,
Are the people who "lift" and the people who "lean."
Wherever you go you will find the world's masses
Are ever divided in just these two classes.
And strangely enough you will find, too, I ween,
There is only one lifter to twenty who lean.

Manuring for Crop Improvement.

Well-balanced Fertilisers Necessary.

Growers Should Study Soil Conditions. **Important Principles Involved.**

THE INFLUENCE OF MANURES on crops is capably dealt with in the principles laid down by Mr. W. Dyke, F.R.H.S., in his book, "The Science and Practice of Manuring."

After dealing with "The Origin and History of Manures" and Plants and Their Food, Mr. Dyke continues:—

THE effect produced on the growth of crops by the application of manures is of a variable character, but there is only one ultimate object in view in using them, i.e., the improvement of the plants to which they are given.

Some manures, especially those containing soluble nitrates, produce rapid and most marked results, while on the other hand the action after applying fertilisers containing potash, magnesia or lime to crops, may not be so plainly visible.

If a good effect does not seem to be realised after using such substances, it ought not to cause disappointment; for in many cases the result, although not observed at first, may be of a beneficial nature, and must be looked for, not in increased growth, but in better coloured flowers, more highly flavoured fruit, and more nutritious vegetables.

It does not always do to judge of results by appearances alone, although at times they may be a safe guide. It is not the most vigorous growing fruit tree that produces the heaviest crop, although the tree may look the picture of health, just as no one would expect to get show blooms from a Chrysanthemum that had looked starved all its life.

It is useless thinking that manures of any kind will give good results if other conditions of cultivation are neglected.

Good fertilisers, like good seeds, can only at best be a help in the production of satisfactory crops. It is no use expecting to get succulent and juicy Cabbage or Lettuce by applying nitrate of soda, if proper cultural details have not been carried out, any more than it is to try and make unsatisfactory fruit trees fruitful by giving them phosphates and lime, when it is known that the greater part of their roots are in a cold, unnatural subsoil.

Neglect of proper management shows itself in crops sooner than neglect in the application of manures to them. In the former case the general appearance is indifferent, and the plants suffer according to the nature of the soil and the extent to which the right treatment has been neglected, but in the latter case the effect would most probably be only a smaller crop.

The general effect produced by the application of some single element of plant food is fairly well marked, and is a help in determining what substance should be applied.

How to Tell when Nitrogen is Required.

The foliage of a pot plant may be wanting nitrogen and consequently looking a pale sickly green, and if the soil be watered with water containing a small quantity of nitrate of soda or sulphate of ammonia, the colour will change to a dark healthy green in less than a week, and the almost stationary growth will start away most vigorously.

The action of a nitrogenous fertiliser will produce a darker green in the leaves of plants, greater vigour and increased growth, for nitrogen is the substance chiefly engaged in production of leaves, stems, and the development of new growth.

When the leaves of a crop lack vigour and are of a stunted, yellowish appearance, it shows that nitrogen is the substance required; but if the growth looks normal, healthy and vigorous, sufficient is present in the soil for the requirements of the crop. This fact will teach when to apply and when to withhold.

Nothing perhaps in the vegetable kingdom is so susceptible to the effect of an over-supply of nitrogen as plants and trees producing fruit. If the growth made in a season on established fruit trees is from a foot to eighteen inches in length, it is a proof that the supply of nitrogen in the soil is in about the right proportion. By applying more it would be an easy matter to make the trees produce shoots twice as long, but this would be obtained at the expense of fruitfulness.

It sometimes happens that young fruit trees will not grow freely enough, especially if planted in a poor soil, they will persist in developing flower buds instead of making growth; a little nitrogen would do good in such a case, by altering the character of the growth.

If a soil be very rich in nitrogen, growth will not mature until a much later date than if less were present, the fruit will be longer ripening, and although the fruit may be large it will be poor in colour.

Phosphoric Acid.

This is a very important nutritive substance, being the chief element of plant food in all phosphatic fertilisers. The effect of any fertiliser containing soluble phosphates can be seen in more fruitful growth, for phosphoric acid seems to be engaged in the formation of flowers and seeds.

Potash.

This substance is a very important part of plant food. It is found in all parts of the plant, but more abundantly in the leaves and young shoots. It also forms the base of all the well-known fruit acids, such as malic acid, citric acid, etc., and is the element particularly active in the formation of starch and sugar in plants.

It has been proved that the first organised food manufactured from water and carbonic acid gas, could not possibly be formed in the leaves if potash were not present, and when we consider that the whole life and development of crops depend entirely upon this organic food, it can be seen how important potash is to plants.

Potash Important for Assimilation.

When the leaves are making this simple organised food, it is rapidly built up into more complex bodies, known as starch, sugar, and inulin, and these substances are either used up in the construction of new plant tissues, or stored up in special kinds of growth as reserve material for future use; thus starch is found in abundance in potato tubers and in many seeds; sugar in many fruits, in beet and in onions, and inulin in the tubers of Artichokes and in Dahlia roots. As potash is essential for the formation of starch, etc., it naturally follows that fertilisers containing this substance will be especially beneficial to those crops in which starch, sugar or any material of a similar nature are found.

Potash assists greatly in the development of leaf growth. The leaves of a plant may be large if plenty of nitrogen is present in the soil, but they will be thin; potash will thicken them.

The Potash in Soils.

Potash, like phosphoric acid, is never found in nature in a free state. In the majority of soils the greater proportion of the potash is found in combination with silica and silicates, forming silicates of potash, and silicates of alumina and potash. Soils also contain to a lesser extent sulphate chloride and nitrate of potash. It is from one or other of the three last-named that plants obtain the potash they need.

Some soils are very rich in potash, because the rocks from which they were formed contained minerals whose composition is made up principally of silicates of alumina and potash. Land of this description is usually of a clayey nature. Sandy, peaty and chalky soils are usually deficient in this substance, but sometimes a sandy soil will contain a fair proportion of grains of mica, and as this mineral is rich in silicates of potash, etc., therefore such a soil would be well supplied.

Lime.

From the fact that lime is found in considerable quantities in the ash of all plants, it is evidently an important constituent of their food. Plants and trees growing in a soil rich in lime and other food, are of a hard, stocky, short-jointed, vigorous nature. All stone fruits require a soil fairly rich in lime, and the same thing applies to vines, Tomatoes, Peas, Beans, etc.

Lime is not found in a free state in any kind of soil. It is usually present as carbonate of lime (chalk), and to a lesser extent as sulphate, phosphate and nitrate of lime. Plants absorb it in the form of nitrate, phosphate and sulphate of lime; it therefore acts to a certain extent as a carrier, taking into the plant such substances as sulphur, phosphorus and nitrogen.

Use of Lime to Plants.

During growth different kinds of acids are formed, the principal one being oxalic acid. If these were not removed they would kill the plant. When the sulphate, phosphate or nitrate of lime has passed into the plant, the sulphuric, phosphoric, or nitric acid is taken away from the lime, and the oxalic or other acids take their place, and are in this way neutralised and prevented from doing harm. Thus the oxalic acid unites with lime and forms a substance called oxalate of lime, which is found deposited in the cells and cell walls in the form of crystals.

Magnesia.

This substance, although present in the ash of all plants, is not of so much importance as those already treated, for it is only present in very small quantities, and most soils contain fairly good proportions of it. There are, however, exceptional cases where an application has proved beneficial.

Its function in plants seems to be to work in conjunction with nitrogen in the formation of that living body called protoplasm. When there is an insufficient supply in the soil, the plant is only able to form pale yellow green chlorophyll granules, consequently assimilation and the manufacture of food in the leaves go on very slowly. This fact will teach when it is needed, and sulphate of magnesia, carbonate of magnesia, or kainit will be the substance to apply.

Iron.

This element is a very important one to plants, for the green colour of their leaves is entirely due to its presence; and even if the foliage be of many diverse colours, there may be found a basis of green, probably hidden to outward view by coloured sap or other matter.

The function of iron is to stain the chlorophyll granules green, but it is scarcely ever found necessary to apply any compound of iron as a fertiliser, as it is so abundantly supplied by nature and is present in most soils. When it is necessary to apply, it is used in the form of sulphate of iron.

If the foliage of plants is of a yellowish colour, and does not turn dark green after nitrogen has been applied, try ½ oz. of sulphate of iron in a gallon of water to see if iron is needed.

By what has been said it can be seen that manures will influence crops according to the prevailing element of plant food in them.

All the fertilisers containing nitrogen will cause leaf and stem growth.

The potash manures will produce growth of a more thickened and matured kind.

The phosphates have a tendency to make growth of a flower and fruit-producing nature and lime that of a short, stocky kind.

A knowledge of these facts helps the grower to correct faulty growth, by suggesting the proper material to apply to keep it balanced, and when blending the different fertilisers in mixing, these points should always be kept in view.

Phosphates have the power to counter-balance the excessive absorption of nitrates from the soil. If the roots of fruit or flowering plants are taking up too much nitrogen from the soil, and consequently are making too much growth at the expense of fruit and flowers, an application of superphosphate of lime would alter it into a more fruit-producing or flowering kind.

The phosphates are always found in larger quantities in young growth than in the older parts, and they are particularly abundant in fruit and seeds.

Phosphoric acid is never found in a free state in soils, but always in combination with the bases lime, magnesia, iron and alumina. The phosphates of lime and magnesia are the sources from whence plants obtain their supply of phosphoric acid.

The Phosphates in Soils.

The quantity of phosphates found in even the most fertile soils is very small, for it is very rarely that they contain more than 5 per cent., but in the majority of cases the amount is not a quarter as much.

When it is realised what a small amount of phosphoric acid there is in most soils, and further, that nearly all of it is present in an insoluble form, and must be changed either by bacteria, soil acids, or the acids exuded from the roots of plants, into a soluble condition before plants can absorb it, it can be readily understood why it is so necessary to apply manures containing phosphates, to soils.

FRUITGROWERS

FOR YOUR FRUIT CROPS USE

. . FITZGERALD'S . .

Pure Bone Dust

Always Gives Best Results

Price £9 - 10 - 0 per ton

On Rails Oakleigh

Full particulars

P. Fitzgerald & Sons

Bone Dust Manufacturers

WARRIGAL ROAD, OAKLEIGH, VIC.

THE MANURING OF FRUIT TREES.

SCIENTIFIC RESEARCH NEEDED.

THE NEED for scientific research with regard to the manuring of fruit trees was emphasised by the Victorian Supterintendent of Horticulture (Mr. J. M. Ward), before the recent Science Congress at Hobart, as follows:—

The subject of manuring of fruit trees has been sadly neglected in Australia in so far as scientific investigation is concerned. Here is a wonderful field for the employment of scientific workers.

In attempting a solution of this most difficult of problems, it must first of all be admitted that, in the past, field trials have been very disappointing. They have not only failed to show definitely the beneficial effects of the many fertilisers, but have also frequently given contradictory results. This may be because the correct basis for securing field results has not been formulated. It has, it seems, been the practice in almost every case to express the results on each plot in terms of the yield of fruit. This is not sufficient, because it does not indicate the nature of the growth of trees throughout the year. For instance, if a manure hastens the blossoming of a tree so that it catches a frost while blossoming, the yield of that tree may be reduced, as compared with an unmanured tree. Had there been no frost, the opposite result may have been obtained. Supposing we had considered yield of fruit only, without carefully noting the daily changes in the trees throughout the year. In such a case our conclusions would be entirely wrong. We would broadly state that the fertiliser in question was of no value for, say, Apples, whereas it may have been of great benefit to later blossoming varieties.

This is true probably of all field trials at the present time, and is mentioned to show why it would be unwise to pin our faith entirely to field experiments.

The best use of field trials, it is considered, is their use in testing out the principles evolved by laboratory experiment. This is the practice adopted by the famous Long Ashton Research Station, which is connected with the Bristol University.

At the same time, it may be of extreme value in the future to have blocks of trees, which have been for many years manured in the same way each year. The cumulative effects of many years' treatment will then be seen, and our methods of determining them will have advanced also.

It is of extreme importance to find out just at what time of the year the tree absorbs its minerals. Research in the case of field crops and vines has shown that the plant secures practically its whole year's mineral requirements in the first few weeks of its renewed activity in the autumn or spring respectively. If this is so for fruit trees, then it is imperative to find it out; and so eliminate the waste of manures which must occur if quickly-acting or soluble compounds are added to the soil, after the period in which the trees are able to benefit from them. A properly equipped glasshouse and plant house for this plant culture work is necessary, together with a suitable small laboratory in which chemical and microscopical studies will be possible.

Plant Propagation.

Basic Principles Described - - A Helpful Survey.

(By George Williams, Director of Fruit Culture, Brisbane, Queensland)

AMONG CULTIVATED PLANTS, more particularly those prized for their fruit or flowers, other means than raising from seeds are employed so that an exact counterpart of the parent may be reproduced. Various methods are employed—layering, cuttings, divisions, but principally budding and grafting. The general tendency amongst plants which have been improved by cultivation and selection, particularly with hardwood varieties, is reversion towards the original, but by adopting the usual available means improved features can be definitely perpetuated. This is particularly applicable to fruit trees, some of which produce a very limited number of seeds, whilst others are entirely seedless.

Among flowering plants the Rose takes precedence, and it is invariably found that amongst the few new varieties catalogued each year that but a very small percentage show the least improvement on those previously existing, while the majority are inferior.

* * *

Stocks.

IN RAISING A SUPPLY of worked plants, the propagation of stocks is the first consideration. As aplied to fruit trees, these are almost invariably raised from seeds of hardy kinds of the particular variety required. Exceptions are noted in Grape vines and Apples, though, so far as Queensland is concerned, it should also be rigidly applied to the latter. With Roses, cuttings of various rampant growers which strike readily are utilised, attention being given almost entirely to a variety erroneously called Manetti.

The selection of stocks and their influence upon the graft or bud growth offers an extensive field for investigation. The influence of such growth upon the stock is an important aspect which has received very little consideration.

It is also recognised that the

Influences of Different Soils

affect very materially the development of trees and plants, and that better results may be obtained in particular soils by trees worked upon particular stocks suited to the immediate local conditions.

Stocks for citrus trees has been a contentious subject for many years, various advocates favouring Orange seedlings for Orange and Mandarin, others preferring rough Lemon, sour Orange, or Shaddock, eash advocate basing his opinion on experience, omitting, through lack of opportunity or the faculty of observation, to note results on different soils, and under varied conditions. The analogy of cells between stock and scion is the basis upon which successful budding or grafting is effected and a permanent union assured.

The Apple and Pear may coalesce for a time, but as the union is imperfect the graft will succumb within a short time. The Pear on a Quince stock will make further headway, but a very stunted tree will result, and usually amongst ligneous trees the diameter of the stock eventually much exceeds that of the graft, an order which can be reversed by working a vigorous grower upon a weak stock.

A Lemon on a seedling thorny Mandarin affords a typical specimen; the cherrimoyer on sweet sop may also be cited.

A dwarf Peach worked on a common seedling affords the most striking influence of the scion upon the stock. The bud makes little more headway in inches than would be in feet if a bud from an ordinary type of Peach had been substituted.

Much has been written of bud selection; the occasion for which is obvious and the selection is a simple matter, but discrimination in stock selection has received little attention, though much is warranted.

Seedling Stocks.

In raising seedling stocks for fruit trees, the first consideration is that seeds should be selected from matured fruit produced on hardy and reasonably vigorous trees, free from indications of disease and, in the case of evergreens, planted in seed-beds as early after taking from the fruit as can be managed. The resultant plants should be allowed upwards of twelve months in which to develop before planting in nursery rows.

* * *

WITH stone fruits the seeds should be buried in slightly moist sand until the following spring, when they may be either planted direct in nursery rows, or in a seed-bed and allowed to make a season's growth.

Seeds of the Custard Apple are usually kept dry until spring and then planted; from the better quality fruits a high percentage of seeds are infertile.

In growing cuttings for Rose stocks hard wood is selected, and with a little shading during midsummer cuttings may be struck at any period of the year, provided the wood is sufficiently hardened. The selected canes are cut into lengths of about 12 inches, the lower leaves (if present) and thorns being removed by drawing through the hand containing a piece of coarse hessian or other suitable material; all buds (or eyes) with the exception of two or three at the top of the cutting are then cut clean out from their bases. If buds are completely removed no suckers will follow, but where partially removed growth will sooner or later make its appearance. The cuttings are then planted in position where to be budded, or very closely in a small bed to be transplanted after having made a growth into such a position. The

depth to which the case of cuttings would be inserted in the soil would average 5 to 6 inches.

The advantage in transplanting stocks after having become rooted is that their bases can be placed much nearer the surface, and the object in removing buds to within a short distance of their tops is that a clear stem is available for budding operation.

* * *

Budding.

GRAFTING IS NOW SELDOM PRACTISED, and to the average propagator budding will meet all requirements. Several important features must be considered in connection with this operation, the principal being that the stock is vigorous and both it and the budwood are in a suitable stage; generally the younger the stock, within reasonable limits, the less chance of failure.

As trees become older their bark thickens and their growth is made at seasonable intervals, whilst in earlier stages growth is fairly regular. On this account, deciduous trees offer the widest facilities, the growth being practically constant throughout the warmer months, and budding may be performed throughout the summer without fear of failure.

Citrus stocks may be treated in early spring or autumn (for various reasons the latter is usually selected by nurserymen). Midsummer budding is also practised when weather conditions and growth are favourable. Roses may be budded at almost any time, though the heat of midsummer is often responsible for failures.

Buds inserted just prior to or during the early ascent of sap have, if evenly cut and properly placed and fastened, every chance of success. During its ascent the sap traverses beneath the bark, depositing additions to the cambium layer, and it is only whilst this is in progress that an increase of the diameter of the plant is being effected. In its descent the sap flows through the previous layer (sap wood), converting this into hard wood, and, though the bark may be most readily detached from its base, there is no possibility of a union being effected during this process. The sap must be either down or in the early stages of rising.

If superficial observation is insufficient, the actual position may be disclosed by raising a piece of bark and noting whether the exposed wood shows a decided green tinge; if a yellow tinge is disclosed it may be assumed that the time is not opportune. This applies not only to nursery plants, but also to trees which have been headed back in the orchard for reworking.

Selection of Budwood.

The selection of budwood in deciduous trees is confined to the current year's growth, and will be gauged partly by the size of the stocks, but mainly upon condition or stage of development. The bases only of suitable shoots can be used, and on no account should the softer parts extending towards terminals be used.

The question of inserting the bud as cut from the stock or first removing the thin layer of wood cut with it may be a debatable one, but with deciduous trees as generally understood the removal of the wood layer is considered advisable, using what is known as a bark bud.

In Selecting Budwood for Citrus, the terminal growth is invariably omitted. Successive growths are determinable for some time by their markings, a joint apparently existing where each terminated. Soft, ill-formed shoots are discarded. Good, sound wood with prominent buds (in some varieties the prominence is less noticeable than in others) of the right size is selected. The diameter of the bud sticks may vary from three-sixteenths to a quarter of an inch or even more, according to the variety and also the size of the stocks.

In budding Roses, if fairly hard wood is used there is no occasion to remove the wood, but in some varieties it is almost indispensable to use half-matured shoots which have flowered (those with soft terminals are generally unsatisfactory), when the bark bud is much preferable.

With citrus the removal from the cut bud of its layer of wood is rarely possible and in effect distinctly disadvantageous.

In using wood buds, the occasion for maintaining a particularly keen edge on the knife blade is more pronounced. A thin blade of the best steel should be specially kept for the purpose. The average budding knife is almost superfluous. The material is seldom of the highest quality, and the blade, particularly in the hands of an amateur, too wide to ensure the necessary curve effected in starting and finishing the cut. The bud should be completely removed with one drawn cut, the heel of the knife being held at an angle upwards of 45 degrees towards the operator. A highly tempered blade 2 inches or slightly less in length by $\frac{1}{4}$ inch in width, thinly ground and finished on a fine oilstone, will reasonably meet requirements on ordinary stock.

For heavy stocks the reverse end of a budding knife is useful in dislodging the bark and assisting in the insertion of the bud. A detached bone substitute can readily be made if required. Where a large number of stocks are to be handled, the addition of an extra knife is an encumbrance, but its use for incising the bark of the stock, which carries small sand and earth particles, is recommended.

The pressure of the thumb against the bud, the lower end of which is inserted by raising the bark of the stock (which has previously been cut transversely and perpendicularly, forming a letter T) alternately on either side by pressure of the knife blade without its being in actual contact with the cambium, is generally sufficient to allow its being forced into position.

Where a Bark Bud is Used, it is customary to allow that part from about a quarter to one-third of an inch above the "eye"

to protrude and this cut off evenly at the transverse section of the T. Where a wood bud is used, it must be pushed well down until its upper extremity just reaches the actual position of the cross cut and not allowed to protrude.

Tying is most satisfactorily managed with slightly damp raffia, commencing from the base of the inserted bud and working upwards, so that no air cavities are allowed to remain.

Under a dry atmosphere in warm weather some advantage is derived from waxing over the tie completely with heated parawax. The tie is removed in from two to two and a half weeks, by which time a junction is effected. The heading back of the stock should be effected when it is in a dormant stage; attempting it during a growing period will generally result in destroying the plants.

Profitable Lemons.

Is This a Record?

£400 Net from 1½ Acres.

The photo. on this page shows a Lemon tree, which belongs to a block of 1½ acres containing 150 trees; after all marketing expenses were paid, it yielded a profit of £450 for the year.

Is this a record for Lemons?

It belongs to the orchard of Mr. A. R. Studds, of "Allambie," Somersby, Gosford, and is manured with an artificial fertiliser at the rate of two tons per acre per year.

Profitable Lemon Trees on Mr. A. R. Studd's orchard at Somersby, N.S.W.

FRUIT TREE STOCKS.

Owing to the misplacing of type, the article by Mr. J. M. Ward in our last issue seemed somewhat disjointed.

The main contention, however, was clear. The Northern Spy is not suitable for all Apple varieties. Research into the whole subject of fruit tree stocks is earnestly advocated.

DUTY ON ARSENIC.

The Tariff Board has under consideration a request for an increase of duty on arsenic and arsenate of lead.

Although no growers' associations were present to give evidence before the Tariff Board, several letters are to hand from growers, protesting against any increase in the price of arsenate of lead.

NEWS IN BRIEF.

Tasmania expects to ship 2,300,000 bushels of fruit to British and Continental markets in the present export season.

Tasmania hopes to develop new markets for Apples in S. America.

The destruction by fire of Mr. R. Harvey's Apple evaporator at Cygnet, Tasmania, is a great loss to the district and the industry generally.

GARDEN WEEK AT MELBOURNE.

Successful Floral Fair, But Where Was the Fruit?

The Garden Week display at Wirth's Park, Melbourne, opened by the Governor-General, Lord Stonehaven, on March 27th, was a great success.

In the main, it is a magnificent floral display. Fruitgrowers are missing a big opportunity by not making this the big autumn fruit and floral fair of the State. The only exhibits of fruit at the recent "Garden Week" display were some 100 type varieties from the Burnley Gardens.

STRAWBERRIES, £2 PER LB.

The first Strawberries of the season were on sale in Glasgow early in March at £2 per lb.

GRAPES IN MELBOURNE.

Should Not Arrive on Saturdays.

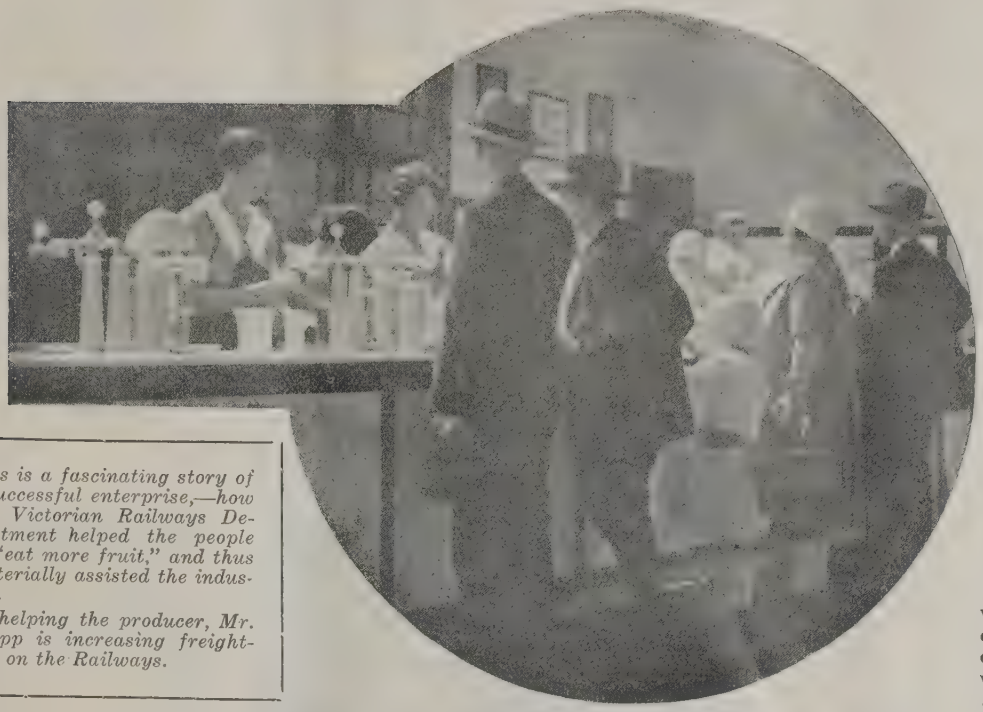
The Secretary of the Retail Fruiterers' Association, Mr. Thompson, called at the "Fruit World" office during April, and directed attention to the inadvisability of growers forwarding Grapes to reach Melbourne on the Saturday, as over the week-end the Grapes become wasty, particularly because of the high water content this season.

We passed the information on to the public press in order that growers might have the benefit of the advice as early as possible.

ASSISTING THE FRUIT INDUSTRY.

The Valued Enterprise of the Victorian Railways Department.

A Comprehensive Survey.



This is a fascinating story of a successful enterprise,—how the Victorian Railways Department helped the people to "eat more fruit," and thus materially assisted the industry.

In helping the producer, Mr. Clapp is increasing freightage on the Railways.

With 65 juice extractors, nearly 2,000,000 citrus fruit have been served at Railway Refreshment counters, since opening the service, 16 months ago.

PEOPLE OFTEN ASK exactly why the Railways Department is in the fruit business, and why Mr. Harold W. Clapp evinces such whole-hearted interest in this phase of primary production. The reason is twofold. Apart from inculcating a health-giving habit, the Department's efforts to expand a local market are helping to avoid waste and absorb production; helping to give a solid foundation to a highly important, expanding primary industry that supports 8,000 growers, and which produces £6,000,000 worth of fresh canned and dried fruit annually. The second reason is purely selfish. A growing fruit business is helping to swell freight traffic.

In 1923, owing to the rapid development of the Victorian irrigation areas, the Railways Commissioners deemed it expedient to exploit the home market to the fullest extent, and "Eat More Fruit" propaganda was inaugurated to foster the soft and citrus fruit, and later, the dried and canned fruit industries.

Posters, calico signs, booklets, and pamphlets were prepared and circulated throughout the State. Press comment on the idea gave it publicity throughout Australia. This slogan —sometimes ridiculed, but invaluable in its psychological appeal—occupied a prominent part in the propaganda.

Subsequently, the Department specialised in the sale of fruit on station stalls, in the sale of fruit drinks, and in the manufacture of raisin bread.

Other Bodies Co-operate.

The Railways were assisted greatly by the willing co-operation of the various fruitgrowers' associations and public bodies, such as the Water Commission, the Agricultural and Education Departments. The State Rivers and Water Supply Commission especially has given whole-hearted support, and has shared the cost of citrus and raisin propaganda, which included primarily the production of recipe books and posters, and a pamphlet entitled "Feeding the Child for Health."

Absorption of Gluts.

Striking proof of the influence of railway fruit propaganda is afforded by the clearing of the threatened Pear glut in Victoria in 1924. There was an abnormal Pear crop in that year, and heavy loss appeared inevitable. Accordingly the Railways Department acted in co-operation with the Pear Growers' Association to assist in the disposal of the crop. Posters and signs were exhibited, and 200,000 copies of a pamphlet passed into circulation through the agency of progress associations, schools and railway stations. As a result, the Pear glut was cleared.

Again, Railway activity helped materially in the success of Melbourne's "Peach Week" at the beginning of 1926. Seventy tons of Elberta Peaches were carried away from the railway stalls by buyers.

The beginning of 1928 again saw the prospect of an over-supply of Peaches, and another "Peach Week," which developed into "Peach Fortnight," was organised with wholehearted Railway co-operation. In the twelve days of business, railway stalls at Flinders-street, Spencer-street, and Prince's Bridge sold 2,500 cases, while special trucks attached to country trains for direct sales, en route, disposed of 5,919 cases. Further trucks in the two subsequent weeks sold approximately another 2,000 cases, so that, all told, the Railway effort succeeded in disposing of approximately 10,000 cases, or nearly 200 tons. Averaging 40 lb. to a case and 4½ Peaches

to the pound, the Department sold nearly 2,000,000 Peaches, or two Peaches to the equivalent of very man, woman and child in Melbourne.

Assistance has also been extended by the Commissioners in the disposal of other fruit crops and also honey.

So far as freight is concerned, the benefit to the Railways is indicated by the marked growth in the number of cases of fresh fruit sent by rail from country districts to Melbourne since the inception of the "Eat More Fruit" campaign. In 1923, 2,840,700 cases of fruit were carried. In 1924-25, the number had grown to 3,300,000 cases, and in 1925-26 to 3,500,000 cases. In the subsequent year, through the thrip pest, the output was decreased, but the past season, although figures are not yet complete, but an estimate gives the figure at around 4,000,000 cases.

Canned Fruit.

The canned fruit industry was languishing until the Government launched a series of advertising campaigns, with which the Victorian Railways Commissioners associated themselves. Australia's appetite for canned fruit was satisfied in 1922 by 6,000,000 tins. Now nearly 20,000,000 tins are required annually to meet the demand, whilst the total Australian output is in the vicinity of 26,000,000 tins. It is estimated, however, that this season the production figure will be increased to no less than 31,000,000 tins, 23,000,000 of which will be Victorian.

Fruit and Fruit Juice Stalls.

Fruit kiosks to facilitate the purchase of all kinds of fruit and juice drinks were constructed on the chief metropolitan stations, and the more important country stations, and during the year 1926-27 the value of fruit sold and used at railway stalls and refreshment rooms was £37,743. Handy schedules, governing the despatch of fruit consignments, were specially drawn up.

The Railways are now the citrus growers' largest customer, having no less than 65 electric juice extractors in operation, and these are being added to. The Flinders-street drink stall, put in commission sixteen months ago, has sold nearly 1,800,000 drinks, or an average of approximately 26,000 a week. The highest number in any one day was 13,000.

By the end of the present season, the Department expects to use 40,000 cases of Oranges and Lemons, as compared with 26,000 last year.

Dried Fruit Publicity.

Efforts to assist the dried fruit industry have been along somewhat similar lines to those made to stimulate sales of fresh fruit. There had been a steady increase in Murray Valley production, while prices ruling on the overseas market have been anything but high on the whole. Actuated by the same motives which prompted the "Eat More Fruit" campaign, the Railways Commissioners initiated propaganda, the cost of which was shared by the State Rivers and Water Supply Commission.

In this instance, calico signs bearing slogans, posters and a recipe book were prepared, and one hundred thousand copies of a pamphlet circulated.

The Commissioners went further. Having a departmental bakery, they decided in October, 1923, to bake raisin bread. Sales jumped, and outside concerns followed the example. The departmental bakery during 1926-27 turned out 200,000 loaves of raisin bread and 8,000 dozen Sultana luncheons, calling for the use of 25 tons of raisins. In addition, the Railways sold 70,000 packets of Sultanas, Raisins and Muscatels, which are now put up in their own cartons. When the Department started baking Raisin bread, only three outside concerns were turning it out now there are close on 200.

Stationmasters as Agents.

Railway stationmasters had, at one time, been authorised to accept orders for fruit from the public, together with cash for cases of fruit which are supplied through the Fruit Marketing Organisation from its central location in Melbourne. Order forms were sent to the stationmasters, together with lists of ruling prices and detailed information showing the approximate dates on which fruit would be available for delivery. These were diverted by the stationmaster to the public. The Central Marketing Organisation, however, has ceased to exist, but the same arrangements would be made for stationmasters to act as agents in the event of its re-establishment.

Trains as Travelling Fruit Stalls.

The Goulburn Valley orchardists were anxious to arrange for the distribution to individual customers of small lots of Peaches and Apricots from louvre trucks while in transit. They wanted to bring fresh fruit direct to the door of the outback farmers and provincial resident. In collaboration with the orchardists' associations, the Department arranged this, and made louvre trucks available for operation over extensive rural areas. A representative of the growers travelled on the train and the stationmasters collaborated to make the scheme a success.

Refreshment counters at Railway Stations are clean, attractive, and inviting. Note the facilities for fruit drinks.

Besides the Goulburn Valley growers, soldier settlers at Redcliffs have also succeeded by this means in clearing off their surplus Grapes, while one or two lots of Apples and vegetables have been sent under the same arrangement. Gippsland growers recently followed this example with considerable success.

Publicity Continuous.

Railway publicity to assist the fruit industry is continuous. The Department is not out to merely maintain the existing home market, but to expand it considerably. Appreciation has been expressed by the growers at the Department's sustained efforts and the policy of encouraging the people of this State to eat more fruit both for the sake of their health and that of the nation's prosperity.

Editorial Chats

ORGANISING THE FRUIT INDUSTRY.

FOR MANY YEARS Victoria led the way in useful organisation amongst fruitgrowers, particularly along the lines of policy for the opening of new markets abroad and at home, and in watching legislation. After the highly successful Conference at Portland in 1926, the Victorian Fruitgrowers' Central Association, which had accomplished much good in all the thirty years of its existence, was wound up, and a Victorian Fruit Council was launched to provide for separate sections, namely, the Apple and Pear Growers' Association, Metropolitan Association, Northern Association, and the Citrus Association.

For various reasons the Council has not functioned. The citrus growers could not see their way clear to join; and there was a decided clash of the opinions of growers on the export control question. The result has been that for the time being the industry in Victoria is lacking a voice to speak for the growers.

This is to be regretted, seeing that 1928 has seen a record Apple crop with no effective voice on the part of the growers to assist in propaganda for its disposal.

From several quarters comes the suggestion that the industry may shortly be served with a new log in the Arbitration Court. At the forthcoming Conference, which is to be held at Warrnambool on 12th June, it is hoped there will be a full attendance of growers, so that an organisation may be launched that will be of practical service to growers.

ARBITRATION COURT.

SHOULD a new log be served on fruitgrowers, is the industry sufficiently organised to have their case adequately represented?

The fruit industry is established in every State. The suggestion made, which comes from Tasmania, is that the fruitgrowers might do well to study the activities of the Stock Owners' Association, which is also Australian-wide in scope. To finance their Arbitration Court work, the stock owners each pay a small fee. There are State Associations, also a Federal Council; the expenses are pooled and the States pay their costs according to the extent of the industry in each particular State.

When served with a log, the Federal Council takes up the matter in a very efficient manner; authentic statistics are compiled, and the case is effectively conducted on behalf of the producers.

This has resulted in unifying the policy and much saving in expense. In fact, no legal advisors are necessary, the case being conducted by the producers' organisation itself.

Few producers have much love for the Arbitration Court, but the fact remains that it is part of the Constitution of the Commonwealth, and the necessity exists for fruitgrowers to face up to realities, and to organise so that they shall not be dealt with piecemeal.

Although fruitgrowers disagree on some matters of policy, on this subject they are all united, in offering resistance to further encroachment on their liberties.

It is quite possible that an organisation financed by the industry to protect its interests in the Arbitration Court, could also effectively function in dealing with other matters of policy, and to protect and uplift the interests of all concerned.

POMOLOGICAL COMMITTEE.

APPRECIATION has been expressed from many quarters regarding the articles recently published in the "Fruit World," advocating the reconstitution of the Pomological Committee. For several years this expert body performed useful service. The Pomological Committee usually met at the same time as the Australian Conference of Fruitgrowers.

With the cessation of the Australian Conference of Fruitgrowers—on account of the Interstate Conference of growers, called by the Federal Government—the meetings of the Pomological Committee have ceased.

Apart from the important items discussed at these Interstate Conferences, the friendly social contact between the growers was of great value.

The time is ripe for the calling of an Interstate Conference of fruit growers representing organisations in the several States, so that the industry may be made articulate.

RAILWAY DEPARTMENT'S ENTERPRISE.

ALTHOUGH most people know in a general way that the Victorian Railways Department has done and is doing valuable work for primary producers—including, of course, the fruitgrowers—it needs an article such as is published in this issue for the whole facts to be realised and grasped.

Under the capable leadership of Mr. Harold W. Clapp, Chief Commissioner, a far-sighted policy has been adopted; by means of propaganda and publicity the public has been taught not only the value of the fruit industry to Australia, but also that the products of the orchards, citrus groves and vineyards are of the highest value for food and health.

The result has been a big increase in the consumption of fresh, dried and canned fruits, and the producers have benefited accordingly. All this means added freight for the Railways Department, so the benefit is mutual.

Further, the benefits of publicity for developing primary industries have been recognised. As a consequence, fruitgrowers' organisations and other sections of producers have voluntarily come forward with substantial sums to be spent in advertising their products.

Mr. Clapp and his capable assistants in the Railways Department deserve the highest commendation for their statesmanlike grasp of the situation and for so boldly and successfully coming forward and demonstrating the wisdom of their policy, which has given an effective lead to the community.

HON. L. M. SHOOBRIDGE, M.L.C. (TAS.), VISITS MAINLAND.

Australian Fruitgrowers' Conference and Pomological Committee Should be Started Again.

It was pleasing to see the Hon. L. M. Shoobridge, M.L.C., of Tasmania, who came to Melbourne to see Garden Week, subsequently visiting the Sydney Royal Show at Easter. Mr. Shoobridge is just as keen and vigorous as when he so capably led the Australian Conference of Fruitgrowers a few years ago: he expresses the earnest desire that this interstate organisation will again function. There are many matters of great economic importance awaiting consideration, states Mr. Shoobridge, which can be better dealt with by an association not called under Government auspices.

In particular, there were urgent reasons why the Pomological Committee should be reconstructed: It was a thousand pities that work had been allowed to lapse. Mr. Shoobridge expressed his willingness to be of service to the industry in any way that lay in his power.

Another Tasmanian visitor was Mr. A. J. Honey, Secretary of the Tasmanian Stockowners' Farmers, and Orchardists' Association. Mr. Honey rendered valuable service in fighting cases of the primary producers in the Arbitration Court.

DIEBACK IN APPLES.

"Orchardist," Nuriootpa, S. Aust., writes:—"Can you give any information as to the cause and treatment of what is known in this State as "die-back" in Apple trees. This appears to be distinct from the so-called die-back caused by injury to roots, any known disease, or bad drainage, resulting in an unhealthy condition, and sometimes decay of the whole tree, or some of the main branches. With the former, only the top leaders are stunted, bearing deformed leaves and fruit, whilst below these, growth is more or less vigorous, and the fruit fully up to standard. This condition may last for years, but if the tops are cut off to a vigorous lateral, the latter, in its turn, becomes stunted, and by continually pruning by this method the tree is apt to become dwarfed.

"Some varieties, such as Stone Pippin, Rome Beauty, or Dunn's Favourite, are more subject to die-back than others. Cleopatra, growing alongside, and under the same conditions, appears to be almost immune. Die-back generally appears in patches, and may be influenced by the manure of the soil."

Answer (by A. F. Thiele, Doncaster, V.).—In regard to die-back, which means that the tree is gradually dying from the top, there may be many causes. In every case it originates from the root, which may be attacked by some insect, fungus, mineral, or wet. It is not any of the surface roots which are suffering, but the tap-roots, which may be down some distance.

Some of the stocks are more susceptible than others. But without seeing the situation and examining the tap-roots, it is impossible to say what is the cause. In Victoria it is usually the root-borer which destroys the tap-roots, and you can see no trace of him in deep soil until you dig down two or three feet.

INDUSTRIAL ALCOHOL.

We acknowledge receipt of a booklet, "The Possibilities of Motor Spirit Manufactured Locally." It is written by Mr. N. Sachoulis, a distilling expert, of Brisbane. He hopes to start a factory for the production of power alcohol, produced from waste fruit, etc., at "Redbank," about 18 miles out of Brisbane.

The proposed industry for extracting industrial alcohol from Maize, Potatoes, waste fruit, etc., has been commended by the Governor of Queensland (Sir John Goodman) and other people in responsible positions.

New Varieties of Strawberries

Twelve New Varieties for Victoria.

Many new and valuable varieties of Strawberries are grown in England. The need has been felt for some time past for these varieties to be tested in Australia. The Nurserymen & Seedsmen's Association of Victoria recently received a letter from the Director of Agriculture, Dr. Cameron, stating that the Department had under review the idea of importing twelve new varieties for testing purposes, and asking the opinion of the Association on this subject. The Association promptly replied, entirely approving of the action of the Department of Agriculture in this matter.

It is easily possible that, with the new Berry Research Station at Mt. Dandenong, Victoria, and other research areas controlled by the Department, these varieties could be tested out commercially.

TYPICAL "MELBA" STRAWBERRIES: Australia would do well to have latest varieties from abroad for commercial purposes and for hybridising.

Record Fruit Shipment.

"Trojan Star" Lifts 201,000 cases from Tasmania.

The Blue Star freighter, "Trojan Star" left Hobart on April 18, with 160,000 cases of Apples, and on calling at Beauty Point, picked up 40,000 cases from Tamar districts, making the surprising record of 201,000 cases in one vessel. A quantity of this is being forwarded to Manchester.

By mid-April the quantity of Apples from Tasmania totalled 1,234,227 cases, with 15 additional vessels to load. The total quantity shipped last year was 980,366 cases.

The previous record shipment in one vessel was when the s.s. "Northumberland," in 1921, lifted 148,400 cases.

The s.s. "Trojan Star" came to Tasmania in ballast, being the first of the Blue Star line to visit Australia. She was previously engaged carrying Apples from America to England, and now holds the distinction of carrying the biggest fruit cargo from Australia.

There will be great interest in seeing how this huge quantity of Apples carries in the ship's refrigerated chambers.

Planting Fruit Trees

Helpful Hints.

Trees and Varieties for Fruitgrowing Districts.

Planting.

A few rules must be observed.

That the land selected be well drained.

Quality or suitability of soil.

Planting of the right varieties with pollenisers.

In Apple planting, closer than 20 feet is asking for trouble in dry seasons; 22 to 24 feet is not too far, as the extra space is compensated for by the extra fruit to size in dry seasons.

Pears at least 25 feet each way.

Peaches, 18 to 20 feet.

On irrigation areas, trees are planted closer. Illustrations attached showing usual pollenising distances.

Cross Pollinisation.

It has been proved now that certain sorts of Apples and Pears require other varieties planted near to pollinise them. In Apples, it has been proved that Jonathan will not set its fruit unless other varieties are planted near it. In planting large numbers of Jonathans, we would recommend that every third and eighth rows should be planted with the sort required for pollination purposes.

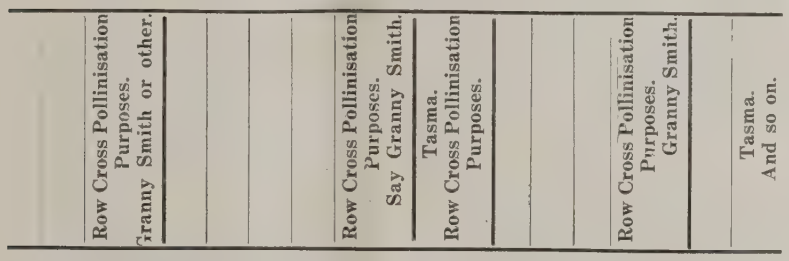
The sorts we would recommend to pollenise Jonathan are Rymer, Stone Pippin, Alfriston, Chandler, Sturmer Pippin, Munro's Favorite, Yates, Granny Smith, Tasma.

In Pears, such sorts as Keiffer's Hybrid, it is quite as necessary to plant other varieties near it for the same purpose. Twyford Monarch, Howell, Duchess de Angouleme, and Beurre de Anjou are sorts that will do.

Table of Distances.

Showing the Number of Trees per Acre.

30 feet apart	.. .. ..	48 per acre
28 „	.. .. ..	55 „
26 „	.. .. ..	64 „
24 „	.. .. ..	75 „
22 „	.. .. ..	90 „
20 „	.. .. ..	100 „
19 „	.. .. ..	120 „
18 „	.. .. ..	134 „
17 „	.. .. ..	150 „
16 „	.. .. ..	169 „
15 „	.. .. ..	193 „


1 2 3 4 5 6 7 8 9 10 11 12 13 14
Row Cross Pollinisation Purposes. Granny Smith or other.
Row Cross Pollinisation Purposes. Say Granny Smith.
Tasma.
Row Cross Pollinisation Purposes.
Row Cross Pollinisation Purposes. Granny Smith.
Tasma. And so on.

The foregoing notes include the practical experience of John Brunning & Sons, fruitgrowers and nurserymen, of Somerville, Vic. Continuing, in relation to varieties, the firm writes:—

We find the most suitable varieties for districts enumerated:—

Victoria.

Harcourt. — Apples — Delicious, Statesman, Jonathan, Dunns, London Pippin, Granny Smith, Rome Beauty, Tasma, Rokewood.

Pears—Josephine de Malines, Packham's Triumph, Bosc, P. Barry, Winter Nelis, Glou Morceau.

Plums—President, Diamond, Grand Duke, and Jap., Santa Rosa.

Quinces—Champions, Pearshaped.

Other varieties of fruits are not a payable proposition.

Mornington Peninsula. — Apples — Jonathan, Granny Smith, Tasma, Rome Beauty, Statesman, and in parts Delicious, Stewart's Seedlings, Five Crown, Gravenstein, whilst Yapeen seedling has some admirers.

Pears—Broom Park, Winter Cole, Packham's Triumph, Bosc, Howell, Capiaumont, Glou Morceau, and where soil (sandy) is available, Winter Nelis. The day of the W.B.C. here is past, as the northern area canneries grow their own supplies.

Plums—Grand Duke and President, with Santa Rosa and Burbank as Japanese Plums.

Quinces—Pearshaped, Appleshaped, and Roes Mammoth.

Cherries—District unsuitable, excepting Red Hill, where Eagle's Seedling, Florence, Bedford Prolific, are successful.

Apricots—Mansfield Seedling or Moorpark, if planted at all.

Peaches—Not recommended except household purposes, when Brigg's Red May, Royal George, and St. John, will suffice.

Gippsland.—Apples — Yates, Jonathan, Rokewood, Tasma, Delicious, Stayman Winesap, Rome Beauty, Gravenstein, King David, and Granny Smith.

Pears—Winter Cole, Bosc, Josephine, Winter Nelis, and Howell.

Plums—Jefferson, Early Orleans, Diamond, Grand Duke, and President, with Santa Rosa, Burbank, and Satsuma (Jap.).

Damsons—Crittenden, or River's English.

Prunes, for jam making—D'Agen, Splendour, Robe de Sergeant.

Quines—Pearshaped, Roes Mammoth, Missouri Mammoth, Champion.

Goulburn Valley.—Pears—W.B.C., Packham's, Josephine.

Peaches (Canning)—Levis Cling, Golden Queen, Phillip's Cling, Pullar's Cling, Healesville Cling. Dessert: Brigg's Red May, High's Early Canada, Zerbes No. 1, Sweet Seventeen, Wiggin's, Smith's Seedling.

Prunes—D'Agen, Splendour, Robe de Sergeant.

Apricots—Tilton, Trevatt (Shipley), Moorpark.

Oranges—W. Navel, Valencia Late.

Lemons—Eureka, Lisbon.

Mandarin—Emperor.

Vines — Gordo Blanco, Waltham Cross.

Kerang, Swan Hill, and Citrus Areas. — Oranges—W. Navel, Valencia Late.

Lemon—Eureka, Lisbon.

Mildura.—Citrus—Same as above.

Vines—Zante, Currants, Sultanas, Gordo Blanco.

Prunes—D'Agen, Robe de Sergeant, Splendour.

Apricots — Trevatt, Tilton, Newcastle, Moorpark, Alsace.

South Australia.

Adelaide Hills.—Apples—Cleo., Delicious, Dunn's, Jonathan, Granny Smith, Stayman Winesap, Tasma, Crofton, Statesman, Rome Beauty, Gravenstein.

Pears — W.B.C., Packham's Triumph, Bosc, Josephine, Glou Morceau.

Plums — Jefferson, Coe's Golden Drop, Grand Duke, President, Yellow Egg, Diamond, Burbank, Formosa, Wickson, Santa Rosa, Wright's Early, and October Purple.

Murray Valley. — Pears — W.B.C., Packham's Triumph.

Apples—Granny Smith, Jonathan, Delicious.

Prunes—D'Agen, Robe de Sergeant, Splendour.

Clare. — Apples — Cleo., Dunn's, Granny Smith, Jonathan, Tasma, Rome Beauty, Statesman.

Pears—Glou Morceau, Josephine, Packham's, Bosc, and P. Barry.

Prunes—Splendour, D'Agen, Robe de Sergeant, Sugar.

Plums — Angelina Burdett, Coe's Golden Drop, Grand Duke, President, Jefferson; (Japs.): Santa Rosa, Wickson, October Purple, Satsuma, Ballena.

Tasmania.

Huon Valley. — Apples — Sturmer, Tasma, Jonathan, Rome Beauty, Stewart's Seedling, Granny Smith.

Pears—Winter Cole, Doyenne du Comice, Glou Morceau, Beurre Bosc, Packham's.

Plums—Coe's Golden Drop, Greengage (old), Jefferson, Diamond, Reine Claude de Bavay, Grand Duke, President, Early Orleans.

Damson—Crittenden.

Prunes—D'Agen, Splendour, Robe de Sergeant; (Japs.): Satsuma, Santa Rosa, Kelsey.

Quinces—Roe's Mammoth, Champion, Pearshaped.

Peaches—Brigg's Red May, Tuscan, Goodman's Choice.

Derwent Valley.—Same as above, with Apricots on Cherry Plums, Moorpark.

North.—Apples—Jonathan, Crofton, Sturmer, Granny Smith, Tasma, Rome Beauty, Stayman Winesap, King David, Alfriston.

Pears—All leading varieties grow well.

Plums—Those listed for the south do equally well in the north.

West Australia.

Mt. Barker.—Apples—Cleo., Dunn's, Dougherty, Statesman, Crofton, Tasma, Jonathan, Granny Smith, Rome Beauty, Stayman Winesap, Delicious, King David, Gravenstein, William's Favourite, McIntosh's Red.

Pears—Packham's, Bosc, W. Nelis, Winter Cole, Josephine, Glou Morceau, Doyenne du Comice, Howell.

Plums—President, Pond's Seedling, Late Black Orleans, Grand Duke, Jefferson, Angelina Burdett, Coe's Golden Drop, Yellow Egg, Diamond; (Japs.): Ballena, Santa Rosa, Wright's Early, Burbank, Satsuma.

Quinces—Champion.

Almonds—Brande's Jordan, Early Jordan, Golden State, Nonpareil.

Bridgetown.—Same as above.

New South Wales.

Irrigation Area. — Canning Peaches —Levis, Golden Queen, Phillip's, Pullar's, Healesville, Thieles.

Pears—W.B.C., Packham's, Josephine.

Apples—Delicious, Granny Smith, Jonathan.

Citrus—W. Navel, Valencia Late, Eureka and Lisbon Lemons.

Orange. — Cherries — Biggareau, Napoleon, St. Margaret, Black Republican, Noble, Eagle's Seedling, Florence, Burgsdorf Seedling, Weder's Early Black.

Gosford.—Citrus—W. Navel, Valencia Late; Lemons: Eureka, Lisbon.

Queensland.

Stanthorpe—Apple growing is fast going out of favor owing mainly to the unsuitability of the soil for that purpose.

Plums, on Peach and Plum stock present a payable proposition. One man this season receiving £100 from 100 trees. Varieties:—Wilson, Shiro, Santa Rosa, Burbank, Satsuma, Blue Rock, Evans' Early, Early Orleans, Clyman, Grand Duke, President, Angelina Burdett.

Prunes—To date are neglected, but the time is arriving when jam factories will be buying in large quantities. Varieties:—D'Agen, Splendour, Robe de Sergeant and Sugar.

Peaches — Wiggin's, High Early Canada, Brigg's Red May, Hale's Early, Smith's Seedling, Triumph.

Nut Culture.

In Victoria, opportunities offer for **Walnut** growing. The hills in the north-east—the Strathbogie Ranges, Dandenong Ranges, and Red Hill, in fact any good high country with deep rich soil.

The English Walnut is mainly planted.

Almonds may be grown in almost all localities on well-drained soils. Varieties.—Nonpareil, Brande's Jordan, Early Jordan, Paper Shell, Golden State, I.X.L., and Burbank and Peerless.

The market for nuts is unsupplied, and confectionery firms are

importing 1,000 tons annually,

valued at approx. £90,000, so there is plenty of scope for the energetic planter to collect some of this amount. It is stated that £200 per acre is not an over-estimated return.

PLANTING FRUIT TREES.

Standardisation of Varieties.

In a letter to the Editor, Mr. G. W. Peart, Goodman's Nurseries, Bairnsdale, Vic., states:—

"With regard to planting, there is a decided change over setting in for the standisation of varieties. Big Apple growers are not too sure that a number of varieties pay their way, and are planting or working-over to three or four kinds which can be worked en masse (almost mechanically).

"In Cling Peaches, the big grower to show a profit, is making all haste to get back to three varieties at most, although canners would prefer some longer succession of varieties from January to end of March."

GROWING DEMAND FOR AUSTRALIAN RICE.

Developments on Irrigation Areas.

It seems impossible that U.S.A. could export Rice profitably to Japan, yet such is the case, despite the competition of coolie labor in the East. When farmers in the Murrumbidgee, N.S.W., irrigation area, decided to grow Rice, the "wiseacres" shook their heads and said it was a waste of time, yet the annual Rice yield in Australia is rapidly overtaking the demand for home consumption, despite the high living standard.

The amount of Rice produced annually in India, China, and Dutch East Indies reaches a tremendous total, but the bulk of it is consumed by the teeming millions of the East.

The modern methods of Rice growing as practiced in Australia are in striking contrast to the old-time methods of the East. One man on the Murrumbidgee area can cultivate, sow, and harvest eighty acres single handed, and the average crop is about a hundred bushels per acre.

Rice grown in Australia is superior to any imported Rice, and with the increasing demand for the home-grown article, it will not be long before the farmers on the irrigation areas of Northern Victoria take the subject seriously. Already Mallee farmers are experimenting with small plots.

All days are good days. If we resist what the day brings, we make a "hard day." If we go about our work sullenly, doggedly, our work becomes the "daily grind." If we meet the day in a full sense of its blessings, we have a "full day"—a day of opportunities, in which we should rejoice.

Dried Fruit Department

THE DRIED FRUITS POSITION.

California and Australia Compared.

Mr. Thos. C. Rawlings, the veteran Chairman of the Mildura District Council of the Australian Dried Fruits Association, has done much good in presenting a clear case regarding the stages of growth of the Australian dried fruits industry and its comparison with Californian conditions. He points out that the Australian Raisin industry commenced in 1890, and became an export industry in 1907. Expansion of the industry was due to the settlement of returned soldiers, and the amount of money invested in the industry by Governments was a factor in obtaining State control.

The A.D.F.A., continues Mr. Rawlings, is an outstanding example of grower co-operation, and is the first body of primary producers in the world who have obtained for 25 years without a break the benefit of the duty provided for their protection. "Our Association, recognising the commercial packer and agent had his capital invested in the industry, took him in and made him an Association packer, who agreed to sell through the authorised Association agents and merchants, and thereby established a complete packing and selling organisation without capital cost. As other packers have opened, they have been taken into the Association."

Mr. Rawlings wrote an open letter to Californian dried fruit growers, directing attention to their low prices, which had a generally harmful effect. This letter caused much interest in California.

"Sun Maid" is the Californian Raisin-growers' association, and it sells through its own organisation—the Sunland Sales Co.—in competition with proprietary packers. They have established considerable goodwill through this trade name.

The general manager, Mr. Ralph Merritt, of "Sun Maid," defends his organisation against the charge of being the first to cut prices, and urges continued loyalty, so that "Sun Maid" and "Sunland" can continue to operate effectively. He sees no possibility of the co-operative and proprietary interests merging or operating in unison. The "clearing-house" plan, adopted by growers of fresh Grapes, would not apply to dried vine fruits.

A summary of the situation appears to be that the "Sun Maid" and "Sunland" organisations are working in harmony with State and Federal laws in U.S.A. The control methods adopted in Australia are not permissible by law in U.S.A.

In short, there is over-production in California, and responsible opinion favours the cutting out of the inferior or "marginal" vineyards, research to reduce costs of production, continued publicity to increase consumption, and loyalty on the part of the growers to maintain and develop their Association.

DRIED FRUITS.

Unfavourable Season.

The dried fruit season this year has been anything but good. Owing to frosts in September, which did considerable damage to the vines, particularly in South Australia, and the early autumn rains further damaging the crops, the output has been much reduced, and there has only been a small percentage of high-grade fruit sent to the packing sheds compared to previous years.

There is still a quantity of fruit on the drying racks, but with favourable weather it should all be in the packing sheds by the end of April.

The bulk of the growers used the hot dip this year, owing to the unfavourable drying season. As the cold-dipped fruit takes longer to dry, growers could not afford to run the risk of bad weather spoiling the fruit.

WHICH PAYS THE BEST?

Hot or Cold Dipped Fruit?

For some years now strong arguments have been raised on behalf of the cold dipping of Sultanas by people who advocate this method, because of the increased prices received for the cold-dip fruit on the London market. Those who still use the hot dip say that the increase in price does not justify the extra expense that the use of olive oil in the cold dip involves. It would be interesting to know the advantages of the cold dip from a financial point of view. Will growers who have used both methods give readers of "The Fruit World" the benefit of their experience?

DRIED FRUITS CONFERENCE.

The conference of interstate representatives of the Dried Fruits Boards, which was recently held at Adelaide, agreed to inaugurate a joint publicity scheme, in order to increase the consumption of dried fruits throughout the Commonwealth.

The Conference affirmed the desirability of a reduction of the number of packing sheds in accordance with the recommendation of the Development and Migration Commission.

It was also decided that the Commonwealth Government be urged to investigate the question of obtaining standard grade samples of a permanent character.

SALES IN GREAT BRITAIN.

The Chairman of the Commonwealth Dried Fruits Control Board advises that sales of Australian dried fruits in Great Britain recorded with the London Agency of the Board for the fortnight ending 12th April represented:—Sultanas, 315 tons, at an average price of £56/12/- per ton.

The total realisations to date of last season's fruit in Great Britain are:—Sultanas, 18,525 tons, at an average price of £58/2/2 per ton; Currants, 4,809 tons, at £42/11/- per ton; Lexias, 2,006 tons, at £43/11/- per ton.

DRIED FRUITS IN W.A.

The West Australian Dried Fruits Board is operating successfully on behalf of the growers of dried fruits in W.A. The officers are as follows:—Chairman, F. W. Davis; Deputy Chairman, J. N. Cox; and Committee, A. D. Doig, P. H. Taylor, and G. E. Cook.

The estimated crop for this year in Western Australia is:—Currants, 1,225 tons; Sultanas, 150 tons; Lexias, 300 tons.

New South Wales

FRUITGROWERS' FEDERATION OF NEW SOUTH WALES.

A MEETING of the Board of Directors of the Fruitgrowers' Federation of N.S.W., was held on March 23. There were present:—General J. Heane (Chairman), Messrs. R. Hill (Narara), A. U. Tonking (Orange), A. F. Dunstan (Sackville), H. G. Such (Griffith), F. Helson (Leeton), T. C. Morrison (Gosford), T. A. Tester (Young).

The Hon. W. E. Kirkness, M.L.C., was also present by invitation.

A report, issued by the Secretary, contains the following:—

The resignation of Mr. V. C. Williams (Griffith) was accepted and on the Irrigation Areas District Council's nomination, Mr. H. G. Such was appointed to the Board; vice, Mr. Williams.

Farm Produce Agents Act.—A lengthy discussion took place in regard to the Farm Produce Agents Act. This matter has been under serious consideration by the Board for some time, during which it was decided to recommend certain amendments to the Government, but before doing so these suggestions were submitted to the agents for an expression of their views. The agents, however, decided on taking other action. It was therefore decided to place the whole position from the growers' point of view before the Government, and to use every endeavor to have provisions of the Act altered to suit the requirements of the grower, which is mainly to protect the grower against losses incurred as a result of the unsatisfactory conditions that have so long existed. The discussion at the meeting, however, confirmed the frequently expressed views that the growers generally are convinced that the Act has been of tremendous benefit to the producer, and that its amendment is a necessity to ensure that it will achieve the object for which it was designed.

Fruit Gluts.—The Secretary reported relative to the conference convened by the Minister for Agriculture to consider the question of "gluts" of fruit and the suggestions put forward by the Secretary to that conference were discussed and approved and a few further matters suggested for inclusion also. The Secretary's suggestions in this connection were as follows:—

(1) Funds to be made available to the Federation for an advertising campaign to increase the consumption of fruit. At present the total available for expenditure under this heading is £150, which is inadequate. It is suggested in this connection, that some arrangement might be made with the other States, whereby a per case deduction from account sales be made, and the fund so raised be used for publicity purposes. This suggestion is brought forward as it is considered that the quantity of fruit sent to the Sydney markets for sale from the other States exceeds that grown in New South Wales.

(2) A more stringent enforcement of the grading regulations.

(3) Encouragement of the use of fruit for the manufacture of fruit juices. This will no doubt require an amendment of the regulations under the Pure Food Act, and negotiations already made by the Federation indicate many difficulties in this connection. Inquiry should be made as to the extent of the use of synthetic drinks, and an immediate and serious effort made to utilise fruit to a larger extent.

(4) The question of the stacking of empty cases in the markets to be considered.

At the present time far too much of the space in the markets is given over to empty cases, which gives an impression of a congested condition. The casual observer, not knowing which cases are empty, undoubtedly gets the impression that the market is at all times congested with fruit, and this must affect marketing conditions in every way. If empty cases were removed, agents would have more room to display fruit, and business would be conducted under much more favorable conditions.

If the markets were cleaner, and in some way made attractive to the general householder, it is considered that a considerable business could be built up by the sale of single case lots.

(5) The encouragement of the establishment of more cool-storage facilities in country centres.

(6) The marketing of inferior fruit particularly unsuitable varieties of fruit be discouraged.

(7) The export of fresh fruit be encouraged. In this connection it is considered that

some form of insurance

should be instituted in order to guarantee growers against any monetary loss, in regard to some fruits; export to overseas markets are being made by comparatively few growers who are thereby bearing the full brunt of the experimental work involved, and until the profitable export is reasonably assured, some form of guarantee against loss should be given to those growers who are prepared to forward shipments with a view to developing the export trade. This is no doubt a Federal matter.

(8) Barrows.

(9) Suburban markets.

(10) That the fruit grown on the Government Experimental Orchards should be used for experimental purposes and not marketed on the local markets for commercial purposes, by this means export markets in various parts of the world should be tested by consignments from the Government Experimental Orchards, with a view to exploitation of these markets should they prove suitable. In this connection it is specially desired that the crop of Ohanez Grapes from the Leeton farm should all be used in experimental work on overseas markets.

The Board expressed its very firm opinion that a conference on the lines convened by the Minister should have been done through the Federation. The conference has already sat two days during which nothing has been done other than a repetition of statements and arguments, all of which are repeatedly heard, and used at meetings of the Federation's Board.

A draft of proposed grading regulations for **Pineapples** was discussed and Departmental recommendations approved.

A draft of

proposed Prune grading

regulations was also discussed, and subject to a few amendments, was also approved, provided, however, that the adoption be deferred till next season to allow growers to become familiar with their provisions.

Abbreviations for Varieties.—The last conference of Interstate Ministers for Agriculture adopted a resolution as to the advisability of a uniform set of abbreviations being adopted by all the States, and the suggested abbreviations were considered by the meeting, and subject to a few minor alterations, it was decided to approve of their adoption.

SYDNEY MARKET OVER-SUPPLIED.

The Minister of Agriculture for N.S.W. (Mr. Thorley) presided over a conference called to deal with the fruit situation, the Sydney market being glutted. Some delegates representing the growers urged that the cases should be paid for or returned to the growers.

Mr. L. J. Jenkins, President of the Fruit and Vegetable Merchants' Association, said his organisation entirely favoured selling the case with the fruit.

It was decided to seek every additional avenue of sales—an increased number of barrowmen, including the providing of temporary stands, during the present season of heavy supplies.

The foundation and framework of a co-operative marketing organization are to aid those producers who have united or who may unite in the enterprise to conduct it along sound and successful business lines.

Tasmania

The Export Season :: Seasonable News and Notes

(By Our Correspondent)

TASMANIA.

AS THE FRUIT SHIPPING season progresses, it is evident that all previous records to overseas markets will be exceeded, and when the final boat has left Tasmanian waters the total should be in the vicinity of 2,350,000 cases.

Whilst the overseas prices have opened up generally satisfactory, the mainland markets are still suffering from a surfeit of supplies, and the returns, except for a few extra choice varieties, are unprofitable to the growers.

The rains which were experienced during January and February considerably altered the yield throughout the State, and the increase over the early estimates is represented in the size of the fruit rather than the quantity, the percentage of small fruit being much less than usual.

At present, 24 steamers have visited Tasmania, the total consignments loaded being 1,193,727 cases. Last year, at the same date, only 590,000 cases had been exported.

South American Markets.

The announcement that a service between Europe and Australia, via South African and S. American ports, would probably be inaugurated in the near future, is welcomed by fruitgrowers, as the possibilities of the S. American trade are generally realised. Reports that have been received from Argentina and Uruguay indicate that these countries are valuable potential markets for Australian produce, if only a direct means of transport can be obtained. In a season like the present, such an additional outlet would considerably relieve the home markets.

In normal years, Tasmania finds a market for nearly

a million bushels

of Apples in Sydney and Newcastle.

Buenos Aires, the principal town of the Argentine, possesses nearly double the population of Sydney, whilst other cities, such as Rosario and Monte Video (Uruguay) could also be exploited. As a large proportion of the artisans and working classes receive a fair rate of wages, the possibilities of trade expansion can be fully realised.

The bulk of Apple supplies are at present drawn from U.S.A. Local production is increasing, but does not nearly fill requirements in the season, and everything points to a good opportunity for Australian exporters, if the proposed direct service materialises.

Fruit Shows.

The district fruit shows have been favoured with splendid weather conditions, and the attendances and receipts are reported to be generally satisfactory.

The Tamar farmers and fruitgrowers' display, which was held at Exeter on the 30th of April, was most successful, the event marking a "red-

DENNIS & COOPER LTD.

COVENT GARDEN, LONDON, ENGLAND

Fruit Brokers and Commission Salesmen

FINANCIAL FACILITIES OFFERED

Make your Shipments of APPLES *through*

BENDER & CO. PTY. LTD.

Hobart Office: 4 Davey Street. *100 Elizabeth Street, LAUNCESTON*

WHO WILL SUPPLY ALL INFORMATION

letter day" in the Association's history, the Committee being able to announce that the show grounds and buildings were now free of debt.

The fruit sections of the show were adjudicated by the Senior State Horticulturist, Mr. P. H. Thomas, who commented upon the excellence of the exhibits.

Mr. Jas. Bulman (Legana) was successful in annexing the silver cup and championship of the plate fruit section, with six plates of export Apples, scoring 99 points out of 100 with an exhibit of beautifully coloured and graded fruit.

Another outstanding display was staged by Mr. J. T. Blackberry (Glengarry), who was successful in the "four plates of export varieties," obtaining only one point short of the maximum. In the Jonathan and Tasma (Democrat) single plate classes the competition was very keen, from 30 to 40 entries being staged in each. Of these, about a dozen plates were as near perfection as possible.

The championship and blue ribbon and silver cup in the packing classes (four cases of export varieties), were awarded to a new exhibitor, Mr. J. Ure, Legana. The highest points in this section were secured by Mr. J. R. Green (Glengarry), 98 points, for the "best five cases of Jonathan," and Mr. O. E. Hall, Legana, with a similar score in the competition for four "half-cases of Pears."

Overseas Fruit Shipments.

The present season, with its bountiful crops and the difficulties that are being experienced in their profitable marketing and disposal, is inducing a feeling of regret in some quarters that growers do not possess an organisation to enable them to deal more effectively with the situation.

There has been a lot of dissatisfaction over the space allotments this season, and the choice of the ports of discharge has also been under severe criticism. No Tasmanian fruit is going direct to Manchester, whilst it seems that Hamburg will receive an excess of requirements. It is evident that the present unorganised state of the industry will always introduce a number of risks in marketing, which could be eliminated under a comprehensive organised plan of operation.

Evaporator Ablaze.

A serious loss was experienced in the Cygnet district when Mr. R. Harvey's Apple evaporator and fruit processing factories were destroyed by fire on the 3rd of April.

The plant comprised a modern kiln type evaporator (the largest in Australia), a new process which has just been installed for the manufacture of canned "Pie" Apple, and a fruit pulping factory and wood-wool machinery.

The Apple evaporating factory was working at its full capacity, employing 90 hands, and processing 1,000 bushels of fruit a day, and a plant had recently been installed for treating the cores and peelings, which, when dried and baled, are exported to Germany.

Apart from the personal loss, the fire is a calamity to the district, depriving fruitgrowers of an outlet for their second grade fruit in a season of abnormal production.

The total loss is reported to be in the vicinity of £25,000, being represented by buildings and plant £20,000, and dried and processed fruits, firewood, etc., £5,000. This was only partially covered by insurance, and will incur a heavy loss on the owners.

It is understood that the factory will ultimately be rebuilt, but could not be completed to operate this season.

TASMANIA.

State Fruit Advisory Board.

A meeting of the State Fruit Advisory Board was held at Hobart on April 17. There were present Messrs. B. J. Pearsall (Chairman), V. J. Skinner, F. Peacock, O. J. Morrisby, A. Davies, T. J. Eddington, P. H. Thomas (Secretary).

Bounty on Dried Apples.—Mr. Peacock reported that the Tariff Board had given an unfavorable decision in respect to the Board's request for a bounty on dried Apples exported overseas. Regret was expressed that Tasmanian representatives on the Board of Trade were not present when the matter was under consideration.

Re Branding of Cases.—The Secretary read correspondence between the Board and the Department of Markets re the proposed alteration of the system of branding. A resolution was carried agreeing to the necessity for a brand showing the country of origin, but stating the object could be gained by applying the brand "Australia" on the end of the case where the name of the producing State is omitted.

Advertising Tasmanian Fruit.—It was decided to ask Sir Alfred Ashbolt to confer with the National Fruit Trades' Association, London, re inaugurating a scheme for advertising Tasmanian fruit on overseas markets next season.

Conflicting Press Reports.—In view of contradictory press reports of London fruit prices, it was decided to ask the Minister of Agriculture to arrange for the Agent-General to forward cables on the arrival of each vessel, detailing the range of prices received at sales of Tasmanian fruit and the general condition of consignments.

London Representative.—It was decided to advise the Minister of Agriculture, in answer to his letter, that the whole matter of appointing a representative on overseas markets to supervise the sale of Tasmanian fruit has been referred to the Annual Fruitgrowers' Conference for consideration, also that the season is now so far advanced as to preclude any action being taken this year in this respect.

Associated Selected Agents.—The resignations of Messrs. Hay Bros and Hadley & Son, Sydney, were accepted.

Blackbirds in Tasmania.—The Director of Agriculture advised that several English blackbirds had been seen. In view of the injury by these birds to fruit crops, it was decided to make every effort to eradicate them.

Rough Handling of Fruit. — Messrs. Terry Bros., of Hayes, wrote describing the rough handling of export fruit. It was decided to seek Commonwealth legislation, making rough handling of export fruit a penal offence.

It was also decided to ask the Minister of Agriculture to stringently enforce the Standardisation Act in respect to the rough handling of fruit for inter state trade.

Branding Abbreviations. — The branding abbreviations suggested by the Conference of Ministers of Agriculture were considered, and several alterations made. A resolution was adopted requesting uniform abbreviations throughout the Commonwealth.

Fruit Trees.—Frank Walker, 110 Brisbane-street, Launceston, can offer all leading export varieties of Apples, worked on seedling stocks, and clean, vigorous yearlings. The New Apple, "Lalla," is now available, and growers who have not seen this fruit are invited to ask for a sample, which will be posted free.

A Scotch farmer had agreed to deliver twenty hens to the local market. Only nineteen, however, were sent, and it was almost evening before the twentieth bird was brought in by the farmer.

"Man," said the butcher, "you're late with this one!"

"Aye," agreed the other, "but, ye see, she didna' lay until this afternoon."

Queensland

Committee of Direction Criticised :: District Notes.

Mr. W. E. Richards, of Mt. Mellum, Landsborough, Queensland, a Banana-grower, does not like the Committee of Direction, nor is he impressed with the report issued by Mr. W. Ranger, manager of the C.O.D., after his recent visit to Honduras and U.S.A.

Mr. Richards's letter, setting out his views, is as follows:—

Lesson 1.—Over-production is a source of loss. Restrictions of output reduces over-production. It also restricts the individual grower's attempt to make a profit. Production should be for use, not for profit. That is socialism.

Lesson 2.—Whilst individuals often fail to make much profit out of the small quantities of fruit they can **produce**, yet big companies can make profits out of the large quantities of fruit they can **market**.

The fruit industry in Queensland is not likely to get into the hands of a big company; but the marketing of Queensland fruit has got into the hands of a group of men who did not make very much as growers, but who are doing themselves very well as marketers.

Between the grower and the consumer, there is a long list of:—Manager, assistant manager, deputy manager, importers, clerks, typistes, loaders, agents, dealers.

The list is too long. It should be cut down to:—Railway, agent, dealer. If possible, to railway and dealer only.

Lesson 3.—The marketers fix their salaries and commissions, which must be paid to them even if the fruit is dumped.

If the grower could get on to the same footing as the marketer and secure a good rate of remuneration, whether the prices of fruit are high or low, then it might be an advantage for him to join in with the marketers. Personally, I incline to the alternative of cutting out the redundant marketers, as in Lesson 2, above.

Lesson 4.—If the C.O.D. gets control of all the fruit, as it aims at doing, it will have to do what a big company would have to do, i.e., Grow Bananas only in the tropical north of Queensland, or in islands of the Pacific, cutting out South Queensland.

Lesson 5.—Experimenting means expense. The marketers will not bear any of the losses they incur. They will experiment at the growers' expense and reap whatever benefits may accrue. (More jobs, higher salaries.)

Lesson (page 95 of Mr. Ranger's Report).—The net results of restriction of output, advertising, grading, coloring, etc., etc., in U.S.A., is that the grower gets 3/- in the £ out of what the consumer pays for the fruit; 17/- goes to the marketers. In other words it costs 17/- to market £1 worth of fruit!!!

Lesson 7.—America teaches us to solve our problems by thinking them out, not by going sticky-beaking to see what others are doing.

Managers who can think, get £12,500 a year. Those who can only copy, get only £1,500.

Lesson 8.—What America can teach us depends on who are the "us." The report does not show that America can teach growers how to produce more or better Bananas in Queensland, but possibly Americans can teach Australians how to get more out of the marketing. More out of the £1 for the marketer.

Lesson 9.—Pruning to time production may be possible in Hawaii under irrigation, but is not so in Queensland, with its erratic rainfall, and no possibility of irrigation.

The above are nine lessons that can be drawn from Mr. Ranger's report by a Banana grower. There are others that could be drawn by other fruit growers.

One problem still remains:—Why is the fruitgrower picked on? Why is it assumed that, because he lives the simple life, he is a simpleton?

There are, for instance, drapers, building contractors, bootsellers, etc., etc., competing with one another—some failing, some making profits. Why is there not a Committee of Direction of boot selling?

The Queensland fruitgrower produces fruit, and consigns it by rail to an agent in Melbourne. He, the railways, and the agent, are the only parties concerned. Why must he support a host of marketers who contribute neither produce nor transport, and who, moreover, take no share of the risk that the fruit may not pay even freight?

The above summary of my letter to the "Daily Mail," indicates my opinion of the C.O.D. (so called, should be C.D.F.M.).

I do not know for what purpose the C.O.D. was created. When it was created I was astounded at the audacity of those who rushed it through and at the density of those who could not see what it was, and might become.

Writing as a Banana grower only, I assert that it serves no purpose. It is only tolerated to the extent of its inactivity. That is to say, so long as it lies dormant and does not interfere, the busy grower steps over its inert body with no more than a muttered curse; but should it arise and shake itself, and attempt to assert the unlimited power over the grower, conferred on it by Parliament, the grower would be called on to reach for a big stick.

Very few of the growers have read the rules of their local Associations, under which the Associations are only allowed to exist on condition that they carry out the orders of the C.O.D., even to the extent of seizing any grower's fruit and doing with it whatsoever they will, or of refusing to allow a grower to rail his fruit to market.

When the C.O.D. attempted to control the agents, they found it was a case of dog bite dog, marketer bite

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.

New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

marketer. The shaking up they got then has kept them quiet till now.

Still they are quietly doing what they can for themselves, and must be watched.

In my opinion, an executive body dealing with the handling of all the varieties of fruit produced in Queensland, is not what is required. An advisory body would be sufficient as a liaison between the Council of Agriculture and the several growers' Councils now known as Sectional Group Committees.

The only work the C.O.D. does at present is a little work that ought to be done by the railway, i.e., they collect information as to the numbers of railway trucks required at the several loading centres. The railways should take that over. The C.O.D. could then dissolve. We should then be left with the Sectional Group Committees (which could be appropriately renamed).

The functions of those bodies would be to take up matters in which growers become involved with outside bodies, and, when called upon, deal with those matters with the greater intellectual, financial, and moral force which a big organisation can bring to bear on any matter as compared with an individual.

BRISBANE

F. B. BOLTON & Co.
ALBERT HOUSE,
BRISBANE.

Brokers and Selling Agents for

FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

We sell to wholesale Distributors only, and do not handle growers' consignments.

We act as Railway **Freight** Agents for growers' joint truck loadings, and secure lowest freight rates.

On **Forward Sales** of fresh fruit we act for sellers and collect cash in exchange for delivery order.

The Brooloo District.

Mr. Albert H. Benson, who was until recently Director of Fruit Culture for Queensland, writes as follows:—

The Editor, "Fruit World."

Sir,—I have read your review and criticism of Mr. Ranger's pamphlet, "What America Can Teach Us," with interest, and consider that you have summed it up very fairly. I have also read the remarks of your Queensland correspondent, and agree with him that the growing of Bananas in Queensland is totally different from that of Central America, and that what applies there does not apply under Queensland conditions.

The Mary Valley district, in which Brooloo is the terminus of the Mary Valley line, has several primary industries, viz.—timber, general agriculture (Maize, Potatoes and Lucerne), dairying and fruitgrowing.

As regards the latter, **Bananas** are of the first importance, and the bulk of the fruit is of the Cavendish variety, though a number of Sugar Bananas are grown near Gympie.

Pineapples do very well, the smooth-leaved Cayenne being generally grown.

Papaws do very well, and some excellent **Strawberries** are produced.

Citrus fruit is not grown extensively, though there is much good land suitable for their culture. Several other fruits of minor importance are also grown, but not commercially.

Very little spraying is done, nor are manures used to any extent.

With regard to Bananas, practically the whole of the work is done by manual labour: the winter cultivation consists of chipping the land as deeply as possible.

There are no experiment farms in the district, though there have been experimental plots of Maize and Potatoes.

As regards the season, we had a bad winter and spring, but since October 1st have had good rains. The country looks well at present. Yours,

ALBERT H. BENSON.

Brooloo, Queensland, 20/3/28.

COVENT GARDEN,
LONDON

Ridley, Houlding
& CO.,

Large Receivers of Australian Fruits.

Solicit Consignments of

Apples, Pears, &c.,

Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

KEEP FIT—EAT MORE FRUIT.

This message is issued by the Victorian Railways Department. Copy it out and send it to your Local Paper.

THIS is a message with a meaning. It means health and vitality for you if you heed it.

Fruit is nature's medicine. It is given us for a purpose. It contains mineral salts, vitamines, organic acids, and other essentials for a clean, healthy body.

Mineral salts keep the blood and tissues in proper condition.

Vitamines have been described as "stored sunlight." They are essential for good health.

Organic Acids are a wonderful aid to digestion.

It is now recognised that the ordinary diet must be supplemented by an abundance of raw vegetables or fruits, so that the vital aids to health may not be lacking.

Acute stomach and intestinal disorders may be avoided entirely if the diet contains the proper amount of fresh foods. Many dietists have suggested that 50 per cent. of the daily food might well be taken in the form of fresh raw fruits and vegetables.

"Too many cooked foods—insufficient raw," is a frequent comment of the scientist on the eating habits of the modern family.

Fresh fruit for the growing family cannot be improved upon as an article of diet!

Eat some fruit with every meal;
See how well it makes you feel.

Get the fruit habit. It pays dividends in health and happiness.

Looking at this "Eat More Fruit" question in its wider aspect, you must realise that increased consumption of fruit will benefit not only you, but the grower also.

It is good for you and your country too!

Have you ever stopped to think that fruitgrowing and marketing in Victoria directly concern the livelihood of more than 100,000 people?

By eating more fruit you will help yourself and your country along the high road to prosperity.

For your health's sake, take some fruit home to-day!

You can order in case lots direct from the grower, and the railways carrier will deliver the consignment direct to your door with a minimum of delay.

Ask the local stationmaster for particulars. He will tell you how to order.

Fruit Tree Stocks.

Northern Spy or Seedlings for Apples?

Later Views on Important Topic. Research Work Advocated.

Mr. Geo. Peart's Views.

The statement contained in the report by Mr. W. Ranger, of Queensland, favouring seedlings stocks for Apple trees is adversely commented on by Mr. Geo. Peart, fruitgrower and nurseryman, of Bairnsdale, Vic., who writes:—

I am sure Mr. Ranger has not seen the older Victorian trees. As to stocks, Spy v. seedling, this is a very big question, but undoubtedly the root-grafted Spy stock is the one that has made the commercial Apple orchards of the Commonwealth. Seedlings may suit in 5 per cent. of the plantings. In South Africa, the seedling has recently displaced the Spy stock in the Western Province, where the Woolly Aphis is to a great extent kept in check by certain parasites.

MARGETSON & CO. LTD.

Fruit Importers & Salesmen

30 James St. and James St. Warehouses,

11 Neal St.,

COVENT GARDEN LONDON, W.C.

and at Jamaica House,

9 & 10 Botolph Lane, London, E.C. & 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.

Prompt Returns & Settlements

Tel. Add.—FRUTERO, LONDON. MARGETSON, LIVERPOOL

Head Office—Covent Garden Market, London, W.C.

Bankers:

LLOYD'S BANK LIMITED

Law Courts Branch, Strand, London, W.C.

Shipping Nos.

431 and 432

Apple Stock in Queensland.

(The Editor, "Fruit World.")

Sir,—

The advocates for seedling stock against Northern Spy, cannot fully realise the national disaster that will be the lot of the Queensland orchardist if put into effect.

Why did the older generation, who were brought up to the seedling stock, hail with delight the advent of the Northern Spy and other blight proof stocks.

One reason was, that the battle against woolly aphis was confined to the top of the ground, not to the root system, as formerly, as well as the top with the seedling stock.

Another reason in favour of the Northern Spy, was that it gave to the tree the strength in the limbs to carry heavy crops of fruit, and to continue to do so. The seedling stock makes the tree system spindly and unable to carry heavy crops without breaking down, causing many broken limbs and ill-shaped trees.

Many items blamed to the Northern Spy for small trees, etc., can be laid at the door of bad drainage and unsuitability of soil for Apple growing.

Instances of heavy bearing of Jonathan Apple trees on Northern Spy, are of 15, 16, 17 bushels per tree—and trees 25 feet apart each way, actually touching one another and making growth of 12 inches to 16 inches on the leaders—what more ideal tree could an orchardist want.

We have on our own places 167 acres of orchards, but these are not on seedling stock, but on Northern Spy, which has proved itself the most suitable stock to date.

One advocate of seedling stocks says it is the natural process of propagation. Quite so—but what of Cupressus Lambertiana horizontalis—which, to grow to uniformity and longevity, is propagated from cuttings to produce the desired result—against this the seedling Lambertiana is grown, and is all shapes, heights, types, and just as they get started a year or two, some die out or become straggly.

So really the seedling Apple stock is not the successful natural propagation in comparison to the grafted Northern Spy.

JOHN BRUNNING & SONS,
Somerville, Victoria.

FRUIT TREE STOCKS.

Although there is much discussion just now regarding stocks for Apple trees, the fact must not be lost sight of that much research work is awaiting attention in relation to all other fruit trees.

An experienced fruitgrower writes, regarding aphis on Pear roots:—Rows of Broom Park Pear Seedlings were planted, as well as rows of French Kieffer Pear seeds and locally saved Kieffer Pear seeds. The two first-mentioned were bad with aphis, while the seedlings from the locally saved Kieffer were free of aphis.

The whole subject needs patient investigation.

F. W. Vear

Fruit & Vegetable Salesman

Commission Agent

WESTERN MARKET
MELBOURNE, VIC.

Highest Market Rates Assured
Prompt Settlements

HAMBURG
(GERMANY).

Ph. Astheimer
And Sohn,

Fruit Brokers . . and Auctioneers

(GERMANY)
Established 1863.

Largest receivers of Australian, Tasmanian, and American APPLES.

Foreign Apples a Speciality.

Fruit and Ornamental Trees.—C. A. Nobelius & Sons Pty. Ltd., Gembrook Nurseries, Emerald, Vic., have large stocks of Apple trees, including Delicious, Jonathan, King David, Sturmer, Winesap, Gravenstein, Rome Beauty, Democrat, Dunn's, Granny Smith, Cleopatra, and other standard varieties. Their valuable 1928 catalogue of fruit and ornamental trees is now available, and copies may be obtained on application.

Research into Berry Growing Problems.

Experiment Station to be Established at Mt. Dandenong, Vic.

Prompt Action by Victorian Government in Response to Deputation.

THE mysterious disease known as "white root" has seriously reduced the crops of Raspberries and other berry fruits in the Dandenong Ranges. The production of Raspberries to-day is only a fraction of what it was a few years ago. Entire gardens have been wiped out through this mysterious "white root" disease. Raspberry crops around the Dandenong Ranges have been reduced from 200 to 12 tons per year.

A view at Kalorama, Mt. Dandenong, Victoria, in which locality the Berry Research Station is being established.

The Mount Dandenong Fruitgrowers' Association has shown much activity in regard to research into the white root, as well as other problems, such as thrip.

On April 18th Col. G. H. Knox, M.L.A., introduced to the Minister for Agriculture, the Hon. W. Slater, M.L.A., a deputation from the Mount Dandenong Fruitgrowers' Association, offering an acre of land for research work. There were present:—Messrs. W. Jeeves (President Mt. Dandenong Fruitgrowers' Association), J. Valantine (Vice-President), E. L. Singleton and J. M. Mitchell (Secretary United Berry Growers' Association). The Government Entomologist, Mr. C. C. Brittlebank, was also present.

Mr. Valantine, in urging the necessity for this research work, stated that the costs for clearing the acre offered, fencing, cultivating, manure and plants, etc., the first year would be £72, and in subsequent years £13, apart from the £6 a year rent. He urged that the land should be taken over and the Scientific Branch of the Department of Agriculture be authorised to carry on research work there to discover a means of checking the white root disease.

In reply, Mr. Slater accepted the proposal, excepting for the paying of rent, which he could not agree to, as a matter of principle. Mr. Jeeves agreed to pay the rent. The Minister authorised the work to be put in hand at once.

Col. Knox cordially thanked the Minister for his courtesy.

The skilled services of the Departmental officers, coupled with the ready assistance of the local producers, should produce some very interesting results, which should have a far-reaching effect for the good of this important industry.

The Mount Dandenong Fruitgrowers' Association and the United Berry Growers' Association are to be commended for their enterprise.

Citrus News and Notes

CITRUS GROWERS' CONFERENCE.

Meeting at Melbourne on May 8th.

AN interstate Conference of Citrus Growers will be held at 377 Little Collins-street, Melbourne, under the auspices of the Victorian Central Citrus Association, opening on May 8th at 2.30 p.m. The Hon. T. Paterson, Minister for Markets, will open the proceedings.

Matters of detail regarding market prices and the advice of same to growers will be discussed at the instance of Shepparton and Murrabit.

The Federal Council has tabled resolutions:—(1) Opposing direct sales for speculative purposes; (2) opposing direct sales to retailers without reference to central organisations to ascertain market prices; (3) growers to be urged to cease marketing through other than Association channels (apart from country sales and for juice and railway purposes).

In the matter of cases, the Ngawe district is moving in favour of the 18 x 11½ x 10½ size. They also propose that all V.C.C.A. agents should open their own stands at the Victoria Market.

Citrus Export.

N.S.W. is proposing an alteration to the citrus export case. The Victorian executive will move, disagreeing with the methods of the Council for Scientific and Industrial Research for promoting citrus export, and urging the Federal Government to carry out citrus export experiments on a commercial scale over several seasons.

As accounts are outstanding for export cases and wraps, authority is sought to deduct same from district levies, or that districts be called on to pay up the accounts at once.

Research.

Resolutions are tabled by the Executive recording satisfaction at the appointment of Dr. R. J. Tillyard as entomologist to the Council for Scientific and Industrial Research, and urging work on citrus trees; also requesting the establishment of a subtropical station (irrigated) and a subtropical station (not irrigated) in the vicinity of the Murray.

CITRUS PRODUCTION.

In South Africa.
Now 50,000 Acres.

According to Mr. H. Clark Powell, Professor of Horticulture, Transvaal University, Pretoria, S. Africa, the most profitable branch of agriculture in the future for South Africa, will be the culture of citrus fruits. He estimates that there are 3,500,000 citrus trees in South Africa, which would occupy

50,000 acres

if planted at 70 to the acre, about one-fifth of California's acreage.

He estimated that the total South African production in 10 to 15 years will amount to ten million boxes a year.

Fruit Shipments
United Kingdom
and the Continent

W. D. PEACOCK
& CO.

24 Southwark St., London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.

Manufacturers IXL Jam and Canned Fruits.

Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.

All Orchard Supplies available at all times.

Agents for—

Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.

H. JONES & CO. LTD.,
HOBART

CITRUS EXPORT.

Australian Oranges are Appreciated in England and France.

(To the Editor, "Fruit World".)

Sir,—I read with deep interest your article in the April issue "Australian Oranges," particularly in relation to the possibilities for export.

For the past two years I have sent a few cases of Renmark Navels to friends in England and France and it is not exaggerating to say that their quality has astonished recipients.

Last year's consignment from Renmark was carried as ordinary 'tween deck cargo, going via the Cape.

A brother of mine in the North of England, in acknowledging a case, remarked that he was suprised to find that only three or four Oranges were over-ripe, said that they were juicier than any foreign fruit available, and concluded by commenting:—"It is strange that these Australian Oranges are not being boomed and sold here to any extent."

One of the French recipients, an Agronomist at Mulhouse, in Alsace, reported: "From the open box, only half a dozen Oranges had to be discarded, being badly bruised and spoiled. All the others bore splendidly the very long journey. We were most suprised, not only with the absence of seeds, but also by their huge size and their delicate flavour. These beautiful fruits repel us very much from the Algerian or Spanish products, usually picked half mature, of bitter taste, of small size and full of pips. Unfortunately the Kangaroo brand is not known on the French markets."

It will be observed that both the above recipients live at some distance from London, so that no little handling of the cases must have been necessary from the time they left Renmark to points of delivery.

I also sent a case to an agricultural chemist, in London, who replied: "The fine sample of Oranges you forwarded from your trials in Australia, arrived safely, and was duly tested by the various authorities in the office. In all sincerity, I must say I have not tasted better Oranges, not even in Jaffa! Of course, one must allow Australian fruit is almost unbeatable as regards flavor, but, nevertheless if muriate of potash can keep it up to and over the standard, it says a great deal for muriate of potash."

This fruit, from the grove of Mr. F. J. Olorenshaw, of Renmark, was merely part of his ordinary export pack, but the trees certainly have been heavily fertilised for some years.

Surely there is awaiting a ready market for the surplus pick of Oranges the Commonwealth will soon be faced with.—Yours faithfully,

LEITH NAPIER.

Dalgety & Co. Ltd.,
Adelaide, 20/4/28.

QUALITY FRUIT TREES

Plant Them Now!

A "Glut" Season like this one proves the futility of growing inferior trees. Only topmost quality can command good market prices when fruit is so plentiful that it far exceeds the demand.

Plant Goodman's Trees therefore, and be sure that **your** fruit will outclass all others.

All Goodman's trees are propagated from proven parentage, expertly grown, carefully handled in their digging, grading and packing, properly protected in their delivery.

Some of the most sought-after varieties are quoted below—prices and details on application.

Apples

Delicious, Granny Smith, Jonathan, Cleopatra (N.Y.P.), Dunn's, Romes, Londons, Yates, Gravenstein, Winesap (Stayman's), Rokewood, Statesman, Sturmer, Tasma (Democrat).

Prunes

D'Agen (true French), Robe de Sargeant, Splendour, Sugar.

Peaches

Bell's November (Dunhelm), Brigg's, Hales, High's, Levis Cling, Pelora, Peak, Phillips', Pullar's, Sims, Triumph and Wiggins.

Plums

Golden Drop, Damsons, Green Gage, Jefferson, Magnum Bonum, Pond's and President.

Cherries

Bedford's Prolific, Early Lyons, Florence, Eagle's Seedling, Napoleon (Royal Ann), St. Margaret.

Japanese Plums

Apple, Ballena, Beauty, Burbank, Kelsey, Delaware, Santa Rosa, Satsuma.

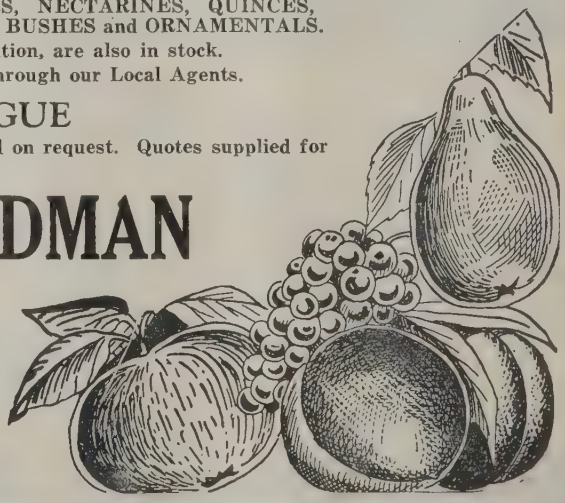
Also leading kinds in APRICOTS, PEARS, NECTARINES, QUINCES, ALMONDS, WALNUTS, SMALL FRUITS, BUSHES and ORNAMENTALS.

Other varieties, too numerous to mention, are also in stock.

Send your order to-day, either direct or through our Local Agents.

FREE CATALOGUE

full of valuable information for growers, mailed on request. Quotes supplied for any order.



CHAS. J. GOODMAN

PICNIC POINT NURSERIES

BAIRNSDALE, Victoria

P. O. Box 47

(W.-McF.)

Insect Friends of Horticulture.

Parasites are Useful, but Spraying Still Necessary.

Views of Mr. David Millar, M.A., Government Entomologist for New Zealand.

SOME INSECT FRIENDS of Horticulture" was the subject of a recent address by Mr. David Millar, M.A., New Zealand Government Entomologist.

Mr. Millar said just as life was a struggle between men, so the life of the insect was a struggle against rivals. Insects were responsible for great annual losses, especially in an agricultural country such as New Zealand mainly was.

One of the most important was the Pear midge (from Europe). In Europe it was not a bad pest, and its natural enemies were consequently at one time not known. The midge laid its eggs in the unfolding young leaf, which curled up, died, and fell to the ground, where the little grubs burrowed. They had a cycle of a month. Search abroad revealed a useful insect called Platigaster, which destroyed the midge, and these were now being bred in Auckland and distributed, with care, to eliminate any undesirable insects which might hatch from the imported material. The Platigaster laid eggs in the midge eggs. The New Zealand orchards where Platigaster was liberated were now showing a full leaf crop.

The mealy bug, which sucked sap from plants, was now being attacked by lady-birds from California and Australia, which ate it or laid their own eggs among the bug eggs.

The Cabbage and other aphids were attacked, usually by Black Leaf 40 or kerosene emulsion. A small wasp-like insect laid eggs in the bodies of the aphids, but unfortunately a third insect laid eggs in the wasp eggs. Ladybirds ate aphids, but an enemy laid an egg in their throat to hatch and devour their juices. The hover fly laid eggs among aphids, and the hatching grub, headless and blind, devoured many aphids.

The giant horntail pest of pine trees attacked only weakly trees, boring holes in the tree trunk. The hatched grubs enlarged the holes. In Europe it was attacked by parasites, including one with an enormously long evipositor, with which it laid eggs in the embedded grubs. This helpful insect was yet to be introduced.

However, parasites were only a partial aid. Spraying was still essential in orchard practice.

The lecture was illustrated with lantern views, and was greatly appreciated.

Red Spider.

(By P. H. Thomas, Tasmanian Government Senior Horticulturist.)

OF LATE YEARS the Red Spider has become rather troublesome in certain Tasmanian fruit districts. This pest plays havoc among the fruit buds that are forming to produce next season's crop, and its depredations upon the foliage will often arrest the growth of the fruit, rendering it unfit for marketing.

The careless orchardist is apt to neglect treatment through not recognising the cause of failing production.

The Red Spider (Bryobia pratensis) is generally found in colonies on the underside of the foliage of the infested trees, and is more prevalent toward the autumn months. The small red globular eggs are laid in the crevices of the bark on the trunk and limbs of the tree during the autumn months.

In cases of bad infestation, these may almost entirely cover the bark, giving portions of the tree a reddish tinge. The young spiders commence to hatch out as soon as the spring foliage commences to appear, and in the first stage are light red in colour. They change to more of a brownish tint as they reach the adult stage.

Unlike other spiders, Bryobia pratensis is a non-web spinning species, and moves freely about on the host plant, extracting the juices of the foliage upon which it exists.

In Tasmania the Red Spider is generally more prevalent in the early summer months, and it is noticeable that certain varieties of Apples are much more subject to infestation than others, particularly Dunn's, Sturmer, Scarlet and London Pippin.

The principal damage wrought by this pest is confined to the foliage, the spiders puncturing the epidermis of the leaf and sucking out the sap and juices which it contains. This causes the foliage to become pale and yellowish in colour, and very often a premature dropping will take place. When this occurs, the fruit on the affected trees will remain small, and ripening will be retarded.

Experimental work of investigating the life history of the Red Spider reveals a very curious and interesting trait. On different host plants the period of hatching of the overwintering egg varies according to the time when the tree commences to put forth its spring foliage. Thus it has been found that, although eggs laid on the Almond and Plum will hatch out just after the tree comes into foliage, in the case of the Apple, the development is delayed almost a month later, when the fruit is putting forth its first spring growth. It seems that nature has ordained some affinity between the host plant and the hatching periods of the egg.

Control.

The Red Spider will easily spread over the orchard, and if left unchecked will develop with extreme rapidity. Besides being distributed by winds, birds, and other agencies, it is of an active disposition, and can easily leave a tree and establish itself on an adjacent one.

Experiment demonstrates that the most effective means of control is the application of strong oil emulsion (1-10) or lime sulphur (1-8) as late as possible before the buds burst. This is the most vulnerable period, and such treatment will kill the eggs or newly hatched spiders.

The problem with old trees is the shelter that is provided by the rough bark, and no matter how carefully the spray is applied, some eggs must escape the treatment. These hatch out early, but if a lime-sulphur spray is applied at the "pink" period, the later infestation should be controlled.

If these early treatments are not carried out, there seems very little prospect of obtaining more than a partial control by the application of summer treatments.

The experiments recently conducted at Cygnet indicate that either Clensel, 1.25 to 1.30, lime sulphur 1.50 to 1.60, or oil emulsion 1.60 to 1.70, will keep the pest in check, and should not injure the fruit and foliage if a light cover spray is applied and the climatic conditions are also not conducive to injury. In order to obtain the best results, it would be advisable

to put on two sprays,

one to kill as many of the insects as possible at the first treatment, and the second within a period of 10 to 14 days, to catch the spiders that have hatched out from the eggs subsequent to the first application.

The problem of effective Red Spider control, like other insect pests, is governed to a large exent by the thoroughness of the treatment and application to all infested trees in the district.

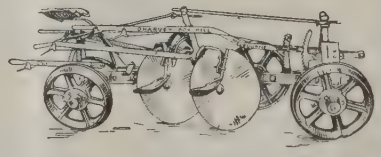
One or two neglected areas will often re-infest orchards that have obtained an early control of the pest later in the season. Fruitgrowers must realise this factor, also its importance from a production viewpoint, and endeavour to take some concerted action to combat the spread of such pests in the districts throughout the State.

"HARVEY" IMPLEMENTS ENSURE SATISFACTION

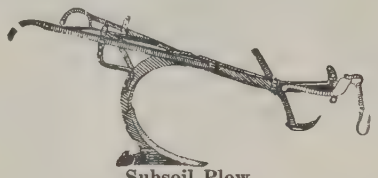
THE SECRET OF GOOD CULTIVATION IS EFFICIENT MACHINERY

"Harvey" Single Furrow Orchard Plow.

These Implements will plow on or off right to the Butts of the Trees.



"Harvey" Heavy Furrow Orchard Disc Plow.



Subsoil Plow.

Every Grower knows the value of Sub-soiling. By its use the production of arid lands and worn-out plantations are increased.
Perfect regulation of depth obtained.

The "Harvey" Patent Orchard and Farm Harness eliminates the havoc done by chains and swinging-bars. No Broken Branches. No Barked Trees. No loose chains to become entangled in the horse's legs when turning. Adjustable to suit a low or high draught implement. **You cannot afford to be without it.**

"Harvey" Patent Orchard Harness.

"ELLISIZE" YOUR FRUIT with the ELLIS GRADER

APPLES, ORANGES, POTATOES, ONIONS
and all classes of other Fruits
PERFECT GRADING NO BRUISING

It is the cheapest-priced Sizer offered, and is so simple that it is the cheapest in the long run. Can be removed from place to place in your orchard wherever you desire to grade.

The Grader with only ONE moving element

One simple adjustment will give this variation in size:—4-5 grades, 7-8 grades.

Write for particulars.

PRICE: Grader only £16. with Table & Hopper £21 10

We Manufacture a Full Range of Special Tractor Orchard Implements

Write for Catalogue, stating either Tractor or Horse Drawn Implements.

D. HARVEY, ORCHARD IMPLEMENT MAKER
BOX HILL, MELBOURNE, AUST.

SHOW ROOMS, 440 ELIZABETH STREET, MELBOURNE. AGENTS ALL STATES.

CANNED FRUITS.

EXPORT OF CANNED FRUIT.

The exports of canned fruits to various destinations from the commencement of season to the end of March, 1928, were as follows:—

Destination	Apricots. Doz. 30 oz.	Peaches. Doz. 30 oz.	Pears Doz. 30 oz.	Total. Doz. 30 oz.
United Kingdom	8,630	15,238	17,862	41,730
New Zealand	2,005	3,930	150	6,085
Canada	—	—	1,200	1,200
The East	281	204	494	979
Miscellaneous	239	271	196	706
Total to all Destinations	11,155	19,643	19,902	50,700

FATE OF LEFTON CANNERY.

Murrumbidgee Growers Anxious.

At a meeting called to consider the unsatisfactory position of the canned fruit industry, over sixty growers attended a meeting at Leeton, N.S.W., recently.

It was contended that the Government should assist the growers, since it was Government action in putting soldier settlers on fruit farms that increased production without doing anything to provide markets for the disposal of the produce.

A committee was eventually appointed to meet the Water Conservation and Irrigation Commission, and secure all possible information regarding the future of the Leeton State Cannery. It was also decided to ask for long-term contracts for fruit—not less than five years—and that the Commission take all fruit tendered on an average basis.

A motion was passed, affirming the opinion that a Federal pool was the only solution of the difficulties facing the fruitgrowing industry.

Cannery Equipment.—The Austral Otis Andebar Cannery Equipment Pty. Ltd., advise us that owing to a reorganisation of their staff, Messrs. Tombs & Howcroft Pty. Ltd., will no longer act as their Sales Division. Clients are requested to make all enquiries direct to the company, at Hanna-street, South Melbourne, the postal address being Box 3, P.O., South Melbourne, or 'phone No. M.1257-8-9.

CANNING FRESH PEARS.

Remarkable Developments in U.S.A.

A California company has developed a process under which ripe Pears are packed for consumption months later. The process, completed after a long period of patient experimentation, combines the conserving qualities of a vacuum and an inert gas.

The Pears are wrapped in paper (just as fresh fruit is packed for shipment), and packed in large tin containers each holding 20 pounds of fruit. A solution is placed on the cap of the container before sealing. The solution is ignited, and the container is immediately hermetically sealed.

The flame inside the container consumes the oxygen, thus creating a vacuum and the burning in turn generates an inert gas which acts as a preservative of the fruit.

The Pears have been opened up ten months after packing, and found to be in the same condition as the date on which they were packed. A big market has been opened up for these 'inned pears in U.S.A.

ETHYLENE GAS FOR COLOURING CITRUS FRUITS.

The "Lightning" Fruit Grader Co., of 5 Hoddle-street, Collingwood, Victoria, have taken over the Australasian distribution of Ethylene Gas for fruitgrowers, packing houses and market gardeners.

Full particulars of the process and equipment necessary can be obtained on application.

NITROGENOUS FERTILIZER.

(To the Editor.)

Sir,—

In reference to the new German fertiliser, "Urea," which is quoted in the March issue of the "Fruit World," to have given such excellent results on the farm of Mr. C. J. Nash, of East Shepparton, and whose price is stated in your notes to be high, we crave space to correct this wrong impression.

The price of "Urea," which contains 46 per cent. of available nitrogen, is £45 per ton, which works out, by simple arithmetic, at 19/7 per 1 per cent. of nitrogen, that is to say its price per unit is 19/7.

Of the other nitrogenous manures, sulphate of ammonia works out at 15/4 per unit, nitrate of soda at 19/4, and blood at 23/-.

Prices of manures can only be compared on a unit value basis, and the above will indicate that the price of "Urea" is by no means excessive.

ROBT. A. BOYLE.
Manager Fertiliser Dept.

Sydney, 20/4/28.

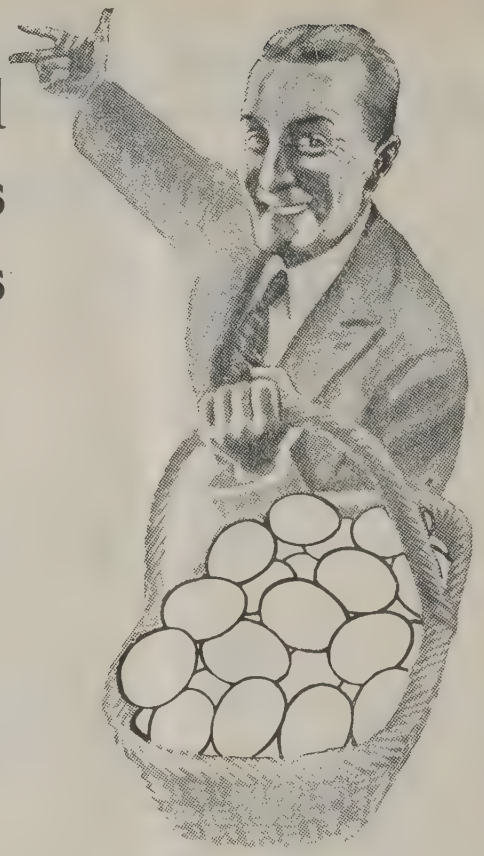
IMPERIAL FRUIT SHOW.

Success at Manchester, England.

The report of the Imperial Fruit Show is to hand. In this report it is stated that the annual exhibition of the Imperial Fruit Show, held from October 31st to November 5th, 1927, at Manchester, was the most successful exhibition since the series commenced in 1921. The display of fruit was excellent. The total attendance was 47,713, and the largest attendance for any one day was on Saturday, 5th November, when 13,788 people paid for admission. The Dominions were well represented, and there was an increase of exhibits in every class.

A scheme initiated for the first time with the financial aid of the Empire Marketing Board, was a huge success. A total of approximately 46,000 samples of English, Canadian and New Zealand Apples, Australian and South African Oranges and dried fruit, and English canned fruit were distributed, it being stated on the bag or carton containing each sample, where the fruit was grown, and in some cases the name of the variety. It is only fair to assume that propaganda of this nature should have a considerable effect in increasing the demand for Empire fruit. Also, cooking and similar competitions were run for adults, and essay competitions. These were also run with the idea of increasing Empire trade.

Have always had a supply of eggs for the last 2 years



MOST people who keep fowls do so in order to have a supply of eggs. Some "backyarders" would call it a hobby, but, it soon becomes a disappointing one if week after week, month after month, their fowls simply gobble up food and give nothing in return. Now, "keeping fowls" can be a hobby and a source of real utilitarian value as well if owners will follow the "Karswood" system of feeding for eggs. The "Karswood" way makes the hobby of keeping fowls profitable from the very start. It is so simple and economical that the veriest beginner cannot fail to make a success of poultry-keeping. Just read the letter quoted below and see how the writer, while keeping fowls as a hobby, yet always had a supply of eggs for the last two years as a result of feeding with "Karswood" Poultry Spice:—

Will not be without Karswood while I keep fowls

"As a hobby I have always kept seven or eight fowls, and have been using the Karswood Spice for quite two years or more, and have had splendid results. I cannot speak too highly of it as a benefit to the fowls in keeping them healthy, also an egg-producer, always having a supply of eggs, besides preserving some. I never buy any eggs all the year round. The hens only missed laying for eleven consecutive days during the whole twelve months, which I think was very good. I will not be without the Karswood Spice while I keep fowls. You may use this note at any time if it will help your advertising but do not put my name unless asked for. Wishing your company every success, and I will speak for your Spice at all times.

(Mrs.) N.P.

Wonderful results

Yet another enthusiast writes to say she has had wonderful results from feeding her birds with Karswood. Here are her own words:—

I have had wonderful results from feeding with Karswood. The chicks look 4 or 5 months old instead of 2. The mothers which reared them were laying when the chicks were five weeks old. I have also 2 Black Orpington pullets hatched on 1st June and were laying at 4½ months and have been laying well since. Thanks to Karswood I am not without any eggs at any time of the year. I have got a neighbour who has some fowls and she can't make out why I am always supplied with eggs when she has not any, but I say it is nothing but "Karswood" to make them lay.

You can use this letter as you think fit. I can't say any more about "Karswood" other than it is absolutely wonderful spice. I recommend it to anybody who has fowls.

(Sgd.) Mrs. E. Lawrence,
Summerhill Road, Camberwell, Vic.

Note the Economy

1/- packet supples 20 hens for 16 days.
2/- packet supplies 20 hens for 32 days.
13/- (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable at all wholesalers and stores at the following retail prices:—

½ lb. packet	Price	1/–
1 lb. packet	,,	2/–
7 lb. tin	,,	13/–
14 lb. tin	,,	25/–
28 lb. tin	,,	48/–

3.M.28

GREEN FEED IS VALUABLE.

Fowls require plenty of green feed.

Laying hens lay more eggs when green fed is given in abundance. Young birds liberally fed on green feed are less liable to chicken pox than those fed scantily or deprived of it.

Lucerne, Berseem, and other clovers are are among the best of green foods. Lucerne is particularly valuable, as, once established, it can be cut all the year round. The nutritive value of clovers is very high.

In the absence of green feed, Lucerne chaff makes a good substitute for adult birds.

On the age of the birds depends the quantity of green food to be given.

From the second week, add finely cut succulent stuff to their mash—for preference, Lettuce, Barley, Oats, gradually increasing the quantity until the birds are three months old. Then feed them the same as adults.

In winter, give adult birds 40 per cent. of green feed in their mash; 50 per cent. in summer.

Feather-eating.

There are several causes of feather-eating among fowls—deficiency of salt, over-stimulation by condiments, want of sufficient shell grit. In confined spaces, fowls need facilities for scratching and dust baths: perches should not be too close together.

If the cause is in any of the aforementioned, remedy it. The birds often maintain the habit until they have moulted. Poultrymen state that dipping in a weak solution of bitter aloes has helped matters.

How to Treat Roup.

Roup often appears at this time of the year: there is an offensive discharge from the nostrils: pus comes from the eyes.

The method of treating this form of roup advocated by the Poultry Expert of the N.S.W. Department of Agriculture, is to syringe out the nostrils and corners of the eyes (if necessary twice daily) with equal quantities of peroxide of hydrogen and water. The following may also be used with some measure of success:—Kerosene (undiluted) or a strong solution of permanganate of potash; boracic acid and salt solution, made by dissolving a teaspoonful of boracic acid and half a teaspoonful of common salt in half a pint of boiling water, and allowed to cool before using. If no other syringe is handy, a common sewing machine oil-can may be used.

In bad cases, where the eyes are bulged with the disease, it is better to kill the bird, as there is little prospect of recovery.

A good way to force the bird to clear the head and nostrils of the mucus is to submerge the head up to the eyes in a solution of permanganate of potash made about the colour of claret. The immersion should take place for a few seconds, the bird's head being held in such a position that it cannot breathe without taking in the solution; this will cause it to eject much of the objectionable mucus. If this is done previous to the syringing, the latter will be much more effective.

Diphtheric Roup, which attacks both young and adult and is very similar to the diphtheria that affects children, will be recognised by the bluish-grey slimy membrane in the throat and mouth of the bird. With this kind the health of the bird is seriously affected, sometimes to extreme prostration, and many die in a few days. This form is apparently much more contagious than the other, and there are practically no outward symptoms as in the previous kind. A pinch of flowers of sulphur lightly dusted into the throat twice daily is almost a specific cure, if taken in time.

The Canker Form.

Canker is a less prevalent and, perhaps, less contagious form of roup than the others, but it attacks young and old alike. It has a less debilitating effect upon the birds—in fact, they may have this disease and still appear in the best of health. The symptoms of canker are a gasping or choking sensation and the bird will sometimes cry out in its endeavour to get its breath. Upon examination it will be found there is a cheesy-looking substance growing round the windpipe, and sometimes in the mouth, on the side of the throat, or even on the tongue.

The remedy is to remove this substance with a piece of wire bent in the form of a small loop, taking care that the affected part is not made to bleed; also, when round the windpipe, that no particle is allowed to fall into that aperture or the result will be fatal. After the removal of the substance, the affected part may be painted with a saturated solution of permanganate of potash or glycerine and iodine in the proportion of one part iodine to ten of glycerine. Another, but rather drastic remedy, is to apply very finely powdered bluestone and permanganate of potash in equal quantities, well mixed. In each case the remedy should be applied twice daily.

Any bird making a choking noise should be examined. Dosing the birds with chemicals and disinfecting poultry houses will keep roup away. Good conditions are the main protection.

Birds that have been debilitated by a mild attack of roup will derive much benefit from a course of Douglas mixture.

BEEKEEPING.

Treatment of Wax.

(By E. A. Earp, Senior New Zealand Apiary Instructor.)

AFTER THE HONEY CROP is disposed of and the bees are settled snugly in their winter quarters, the beekeeper should give attention to clarifying his wax. Where a solar extractor has been used during the summer, it will be a simple matter to collect the cakes of wax which have been melted in this manner and reduce them to one or two large cakes; but where a number of combs is to be treated a wax-press is almost indispensable. For large quantities, the "Root" wax-press is best. No special building is needed for wax-melting; an ordinary washhouse is suitable. Choose a cold day for the operation; the smell of hot wax excites bees.

Commencing operations, fill the copper half full of water, and when this is heated, place the combs—which must have been removed from the frames—in the hot water. Have a strong stand ready to support the

wax-press, and inside this place a kerosene heater, so arranging it that the flame comes in direct contact with the bottom of the press. Fill the water-compartment of the press with boiling water, which the heater will now keep boiling, and in the perforated basket of the press place a coarse scrim bag, large enough to reach to the bottom of the basket. The combs in the copper should be stirred with a stick until the wax is all melted, and the contents of the copper—water and wax—should then be ladled into the scrim bag in the press. The top of the bag should now be folded so as to allow of one or more of the wooden "followers" belonging to the press to be placed on top of it, and the screw placed in position, when a stream of water and wax will immediately commence to flow from the outlet provided in the press. A kerosene-tin or similar vessel should be placed in position under the outlet.

Two precautions are necessary:—(1) Apply pressure with caution. Until the flow from the press slackens, the screw should not be turned, and when it becomes necessary to apply pressure, this should be done without appreciable effort. Thus the maximum of wax will be obtained with very little risk to the machine. (2) Only a comparatively small quantity of water and wax must be put into the bag at each ladling. On no account attempt to fill the scrim bag at one operation. When the wax and water cease to run from the outlet, the bag should be removed and the slumgum emptied out before the press is required to deal with any more wax.

As the copper will contain a great deal of water, keep a kerosene-pump in the vessel to receive the contents of the press. If this is sunk to the bottom of the vessel, it will draw off a great deal of the water, leaving the wax, which will, of course, be on top, untouched. This will result in the wax being gathered in far larger cakes than if several vessels are used. The wax should be set aside to cool as gradually as possible, this being best achieved by covering the tin containing it with corn sacks or similar material. The gradual cooling helps to clarify the wax. When it is quite cold, the cake should be taken out of the tin and carefully scraped.

The tin should now be washed out and partly filled with clean hot water, the cake of wax replaced, and the whole gradually heated until the wax is once more melted. After this second process the whole should be slowly cooled as before, and when the wax is once more removed and scraped it will have reached its commercial form. The wax-press and copper should be cleansed while still hot. The water should be emptied out of its compartment in the press at once, and the press placed to drain in order to prevent rust. The slumgum must be gathered up and burnt, and the bag washed and dried for future use. —N.Z. Journal of Agriculture.

SULCAR
CARBONISED SULPHUR
Spraying Mixture.
THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED
DOES NOT BURN.
Manufactured by
SINCLARE & Co.
BOX 3, KING ST., P.O.-SYDNEY.
(Works,-Alexandria)

GENUINE
"Black Leaf 40"
IN
10lb. & 2lb. tins
DISTRIBUTORS
The PRODUCERS' DISTRIBUTING Society Limited.
SYDNEY and MELBOURNE

A NEW (?) FRUIT.

(By Edward E. Pescott, F.L.S.)

AMERICAN exchanges are reporting a new hybrid fruit, under some such name as the "Prunasimmone." It is stated to be a cross between the Persimmon and the Japanese Plum. The tree is said to be sturdy, and rough-barked, like the Persimmon, while the acidulous sweet fruits are red, somewhat like the Tomato.

This, of course, is another of the American absurdities, and I suppose there will always be enough gullible folk ready to pay big prices for such things. The possibility of such a cross is exceedingly remote, but it may, of course, be possible. But the Persimmon belongs to the Ebony family, and the Plum to the Rose family, families very distantly remote, and the result, as indicated, is very improbable.

But both name and description "give the show away." For surely the "new" fruit is nothing more or less than the original Japanese species, Prunus Simoni. This tree has a rough, blackish bark, and bears large red ornamental fruits, which certainly are acidulous; but in my experience, no one would wish to eat a second one.

I know of only one tree of Prunus Simoni in Australia, and I am taking steps to obtain buds, in order that the tree may be tested and kept for observation, at the Burnley Horticultural Gardens.

NOW YOU KNOW.

The Total Stranger accosted the Friendly-looking Man and asked: "Would you be kind enough to direct me to the home of Mr. Augustus Wimple? I am told he lives somewhere in this neighbourhood."

"With pleasure," replied the Friendly-looking Man. "Go down this street until you come to a house with a Syringa vulgaris growing by the front gate. Turn left there, and cross the street, going until you see a large Fagus grandifolia. Near it you will recognise an Acer platanoides, and here, if I may make a suggestion, you should be careful not to confuse it with the Acer saccharinum. Three doors from there you will note a yard enclosed with Ligustrum ovalifolium. You cannot miss, because there is an especially fine example of the Quercus rubra on the lawn, near an alba lacinita pendula, and there is quite a clump of Diervilla amabilis hard by. To help identify the place, I might say that there is a planting of Thuja occidentalis compacta near the house, and the building itself is almost hidden under Hedera helix."

"Thank you, very much," said the Total Stranger. "That simplifies matters immensely."

"Glad to have been of some slight service," answered the Friendly-looking Man.

The Friendly-looking Man, it might be explained, was Proctor Learned, professor of botany at Freshwater University.—"Saturday Evening Post."

WESTERN AUSTRALIA.

Seasonable Notes for May.

PRUNING will now claim the attention of growers of stone fruits, particularly in the early districts near Perth, where most varieties of Apricots, Plums, and Peaches will have shed their foliage. Where varieties of Peaches liable to shed their buds (Briggs, Hales, Downing, Alexander, etc.), are grown, it is advisable to delay pruning until the buds have burst in early spring (writes Mr. Geo. Wickens in W.A. Journal of Agriculture).

Spray deciduous orchards for the control of San Jose as soon as the leaves have fallen, using commercial lime sulphur at a strength of one gallon in seven gallons of water, or a reliable brand of spraying oil may be substituted for lime sulphur, using one gallon of oil in 19 gallons of water. To keep San Jose scale in check, it is necessary to spray twice while the trees are dormant: the first to be applied as early as possible after the leaves have fallen, and the second towards the end of winter, in late August. As August is often a very wet month, care should be exercised in making the May spraying a very thorough one.

Where

Orange and Lemon trees

were not treated for brown rot last month, they should be sprayed during the early part of this month, using Bordeaux or Burgundy. In tests made both by this Department and individual growers, it has been shown that one spraying in April or early May is sometimes sufficient to control the disease for the remainder of the season, but should the season prove favourable for the fungus, the trees should receive a further spraying when signs of infection appear. Later sprayings have the effect of spotting the fruit, but it is better to remove spray spots from sound fruits at time of picking than to have the crop destroyed by disease.

In recommending spraying, I am not overlooking the fact that there are some districts where the disease has not appeared, or at any rate, has not been noticeable, and in such places I would not suggest spraying merely as a preventive measure, but should it make its appearance, spraying should be resorted to at once.

With the advent of wet weather, baiting operations for fruit fly are largely ineffective, but trapping in Orange and Lemon groves should be continued throughout the winter months.

For Orchard Manuring.—Attention is directed to the offer to supply pure bone dust at £9/10/- per ton, free on rail Oakleigh, Victoria, by P. Fitzgerald & Sons, bone dust manufacturers, Warragul-road, Oakleigh. Bone dust supplied by this firm has been found beneficial in orchards and vineyards. Messrs. Fitzgerald & Sons are well established in this business, and would be glad to answer any enquiries.

CORRECTION.

The telephone number of Clensel Pty. Ltd., is C 2654, not 2657, as appears in the advertisement on page xiii.

PERSONAL.

Mr. W. J. Nankervis, Secretary of the Diamond Creek (Vic.) Horticultural Society, was a valued helper at "Garden Week," Melbourne. He states that this big function offers a big opportunity for growers to advertise the fruit industry and the districts concerned.

Selected Fruit Trees.—Attention is directed to the list of varieties of fruit trees offered in the advertisement of C. J. Goodman, fruit tree nurseryman, of Bairnsdale, Vic. In addition to the selected varieties which are mentioned, Messrs. Goodmans have a full range of fruit and ornamental trees, details of which are included in their catalogue, which will be sent free on request. The firm points out that all their trees are propagated from proven parentage, and that the utmost care is exercised in all cultural treatment.

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

"YARRA"
BRAND
SPRAYS
PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street / 155 Yarra Street } Abbotsford, Vic.

Victoria

Fruit Crop Reports ∴ District News and Notes

Seasonable Report.

The abnormally heavy rains during March, which have been of inestimable value to agriculturists and pastoralists generally, have not proved an unmixed blessing to fruitgrowers. Harvesting operations were considerably interfered with, and, owing to the exceptionally heavy crop of all kinds of fruit, there has been considerable waste.

Growers in the Goulburn Valley complain that a fairly large quantity of their Pullar's Cling Peaches were lost owing to the unseasonable rains. However, there is an ample supply of high quality fruit for the canneries, factories, fresh fruit markets and export. Unfortunately, the supply on the local markets has exceeded the demand, and consequently growers recently have not received remunerative prices for all their fruit.

Large quantities of fruit are being stored.

The second crop of Figs was heavy and of good quality.

The second crop of Passion Fruit came along well.

There is no material alteration since last month's report in the fruit crop prospects. Codlin moth has been unusually troublesome, but under the circumstances has been fairly well controlled where the necessary care has been given in respect to spraying and orchard sanitation.

From 1/1/28 to 24/3/28, 440, 766 cases of Apples and 25,369 packages of Pears were shipped, making a total of 466,135 packages of Apples and Pears shipped for the period mentioned. The estimated export of Apples to 24/3/28, was 423,000 cases. There are still some 407,234 cases of Apples and 92,631 packages of Pears yet to be shipped. The original estimate at the beginning of the season was 848,000 cases of Apples and 118,000 packages of Pears.

A great improvement is being shown in the method in which fruit is being prepared for export, both with respect to the packages used and the packing of the fruit itself. Many shippers are now using clean white cases bearing an attractive pictorial label. This method of preparing fruit for export is on the increase.

Viticulture.

The abnormal rains of February were, to a limited extent, renewed here in March. Showers have fallen in most parts of the State, from March 13 to 21. At Rutherglen Viticultural Station, these aggregated 2.26 inches which, added to 10.72 inches in February and 2.13 inches in January, brings the total for the year (to March 21) to the unusual total of 15.11 inches. The average for the first three months for the year is 4.30 inches. This year's rainfall, to date, is practically equal to the whole of last year's (15.39).

In the North-west, showery conditions also prevailed during the same period, though in the majority of places to a lesser extent. A feature of the abnormal rains of the first quarter of this year is their patchiness; localities not far distant registering very different rainfalls.

Dried Fruit Crops Suffer.

As was only to be expected, the Grape crop has been undesirably affected. In the dried Grape districts **Currants** suffered severely — damage to the extent of 40 per cent being reported in some cases. **Sultanas** have suffered much less as regards quantity, but the grade has been reduced.

The hot dip

is being applied much more extensively than would otherwise have obtained. There will be little cold dipped fruit this season. Drying has been in progress for some weeks. The yield will be a good deal short of last year's. In addition to the frost damage of last September, the recent rains must be reckoned with.

In the wine districts

in the North-east, it is difficult to as yet estimate the effect of the rain. Up to the beginning of the month, it was considered to have done more good than harm, the vines having severely felt the dry conditions of the end of the year 1927. The quite recent rains, however, have caused some of the earlier Grapes to split though later sorts have stood well, so far

Vintage started at the end of March. Though it is premature to forecast the yield, it will be probably somewhat short of last year's. Quality has suffered less than was expected— though somewhat variable, gravities are on the whole satisfactory.

Citrus.

Further good rains have fallen throughout the Citrus areas, and as a result Citrus trees are growing well. The crop for the coming season is looking remarkably well in all varieties.

A fairly general flowering of Orange trees has resulted as a consequence of the rains. In many instances the setting of the bloom is so very light that the spring blossoming should not in any way be interfered with.

THE GOULBURN VALLEY.

Growers and Their Cultural Methods.

Manuring and Spraying.

Visit by "Fruit World" Representative.

IN continuation of the articles published in previous issues, a representative of the "Fruit World," Mr. Colin Gorrie, states the experiences of growers visited:—

Mr. A. W. Phillips, of Shepparton East, had his 20 acres of orchard planted with the following varieties of fruits:—Peaches, Pullar's, High's, Hale's; Apricots, Moorpark. Pears, Williams. Citrus fruits, vines, and Apples were also grown. For a manure, a mixture of superphosphates, potash, and nitrate of soda was used. The codlin moth and Rutherglen bug were found troublesome. Against the former, four sprayings with arsenate of lead were found necessary, while smoke fires were tried, but with little success, against the Rutherglen bug. Mr. Phillips is of the opinion that where the ground is damp, there the bug is likely to stay.

Mr. R. C. Brown, of "Brieryside," Shepparton East, is now farming on what was for three years the Government experimental plot for citrus fruits. Peaches and Prunes are also grown, in addition to the citrus fruits.

Mr. J. A. Menkhurst, of Shepparton East, has the usual varieties of Peaches, Apricots, and Pears. For a manure, he used five pounds of superphosphate per tree. Three sprayings of arsenate of lead were found satisfactory against the codlin, but Mr. Dickson was successful in eradicating the Rutherglen bug with a mixture of one gallon of red oil to seventy-five of water, one quart of phenyle and one pint of black leaf to forty of water.

Mr. J. T. Coe, of Orrvale, used for a manure 9 lb. of superphosphate and 2 lb. of sulphate of ammonia per tree. This is a young orchard. No satisfactory remedy was found for the thrip.

Mr. A. E. Dickson has 40 acres at Shepparton East under the usual varieties of Peaches, Pears and citrus. For a manure, he used a mixture of superphosphate, potash, and sulphate of ammonia, giving five pounds to a tree. Mr. Dickson considers that three sprayings of arsenate of lead are essential against the codlin, though four are better, and if the time is available, five.

In addition to growing a large variety of Peaches and Apricots on a 43-acre orchard, Mrs. J. Pearce has a number of fine Williams Pear trees. For a manure, four pounds of superphosphate, one pound of sulphate of ammonia, and one pound of potash per tree was used.

Mr. R. O. Lilley used a manure of from five to six pounds of superphosphate, together with two pounds of nitrate of soda, per tree. Three sprayings — sometimes more — were used against the codlin, while excellent results were obtained against the Rutherglen bug by spraying with benzole emulsion mixed with one part of black leaf 40 to 80 gallons of water.

On a fifty-acre archord, Mr. E. C. Borghese, of "Silvania," Shepparton, has a comprehensive variety of Peaches; in addition, he grows Pears, Apples, Grapes, citrus and Apricots. For a manure, he used six pounds of superphosphate and two of nitrate of soda per tree.

Mr. G. A. Plant, of Shepparton, has an orchard of Peaches, Pears, Apricots, Apples, Prunes, and Plums. He used a manure of 4 lb. of superphosphate per tree, except in the case of Tuscan and Goodman Peaches, when 2 lb. of nitrate per tree were added to the superphosphate, and applied one month before ripening. Mr. Plant was not troubled with the Rutherglen bug, and he found that two sprayings of arsenate of lead were sufficient against the codlin moth.

The better known Peaches, Pears, and Apricots, also Angelina Plums and Sugar Prunes, are grown on Mr. F. Laffy's 22-acre orchard at Shepparton. This grower uses a manure of 5 lb. of superphosphate and 2 lb. of sulphate of ammonia per tree. Three sprayings of arsenate of lead were given against the codlin moth, and of these the first was deemed to be the most effective. Mr. Laffy did not find smoking effective against the Rutherglen bug.

Mr. R. Kilpatrick has 30 acres at Orrvale, and for a manure he used 4 lb. of "plant food" and 7 lb. of superphosphate per tree. Mr. Kilpatrick used two sprayings of arsenate of lead for the codlin moth on William Pear trees, but considers more sprayings would be necessary on later varieties. Smoke fires were not found to give satisfaction against the Rutherglen bug. Messrs. Pattinson Bros., of Ardmona, have 66 acres devoted to canning varieties of Peaches, Pears, Apricots, also vines and Quinces. A manure consisting of 5 or 6 lb. per tree of superphosphate, mixed with 1½ lb. per tree of sulphate was used with good results. Two, and sometimes three, sprayings of arsenate of lead was used for the codlin moth. Smoking was tried for the Rutherglen bug, but the results did not justify the expense.

Against these experiences with the bug is that of Mr. V. R. McNab, also of Ardmona, who has 82 acres under Peaches, Apricots, Pears, and vines. Mr. McNab found that a thorough smoking was very effective; it also prevents breeding.

Mr. A. Lenne, of Ardmona, has a large orchard of 220 acres, devoted to Peaches, Pears, Apricots, citrus, Figs, and Plums. The varieties include:— Peaches: Sneed, Mayflower, High's Early, Hale's Early, Zerbes, Louise Grognet, Nicholl's, Sims, Phillips, Goodman's Choice, Salwey, Pullars, Red Italian, Thiele, Healesville, Late Cling (Eureka). Eighty acres of Pears are devoted entirely to Williams The Apricots include Moorpark, Alsace, Blenheim, Shipley. A mixture of lime, ashes, superphosphate, and sulphate of ammonia was used as a dressing. Another manure that gave excellent results is a German preparation—"Di-Ammon-Phos"; one pound of this manure was used to a tree. Mr. Lenne considers that six or seven sprayings of arsenate of lead are necessary against the codlin moth in Pears. Trees should be sprayed until a fortnight before picking. This will give fruit 90 per cent. to 98 per cent. clean.

Mr. H. D. McKenzie stated that this was the worst year for the codlin moth that he had experienced. On the other hand, however, he had not been troubled with the Rutherglen bug at all. He considered three or four sprayings of arsenate of lead satisfactory against the codlin moth. For a manure, he used 5 cwt. per acre of superphosphate and 2 lb. per tree of either muriate of potash, or nitrate of soda.

Mr. A. Clark of "Somerset Farm," Mooroopna, has a total area of 1,300 acres; of these, 135 are orchard, and are devoted to the usual varieties of Peaches, Apricots, and Pears. For a manure, 5 or 6 cwt. per acre of superphosphate was used on the old trees. Three sprayings of arsenate of lead gave fruit very free of the codlin moth. Systematic smoking was found to give very good results as regards the Rutherglen bug.

Mr. W. E. Lane, of Mooroopna, has 37 acres under Peaches, Apricots, and Pears. For a manure, he uses a mixture of superphosphate and potash, giving 4 cwt. to an acre. Smoking at night with sulphur was found to keep the Rutherglen bug away. Two sprayings were given against the codlin moth, but three would be better.

Messrs. Young Bros., of Ardmona, have 122 acres of orchard. The can-

Are You Planting Fruit Trees this Season?

If so, do not forget that we have ample supplies to offer.

Trees grown at Kinglake and Yarra Glen

Larger, Stronger, Healthier than ever

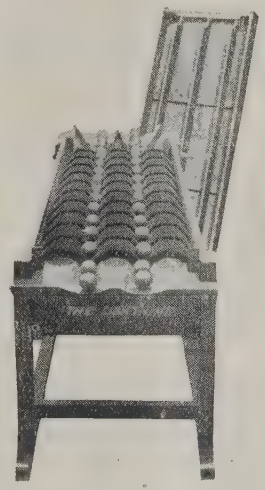
Apples.—Jonathan, Five Crown, Rome Beauty, Cleopatra, Granny Smith, Delicious, Democrat, Statesman, etc.

Also Pears, Plums, Peaches, Apricots, Quinces. Best varieties.

We must sell and are prepared to sacrifice the best trees for one season at prices far below the cost of production. Do not miss this chance—

Write now.

JAMES W. LAWREY, Kinglake Nurseries, Yarra Glen



"To Choose the best is Wisdom"

Australia has the Goods

Complete Up-to-date Equipment

for

CITRUS PACKING HOUSES

including

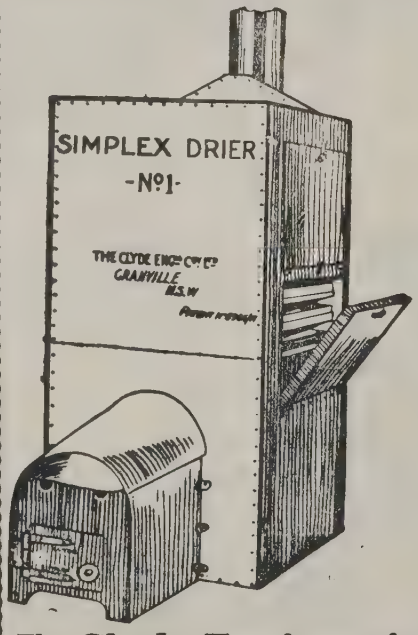
WASHERS
DRIERS
POLISHERS
SORTING TABLES
GRAVITY CONVEYORS
BOX PRESSES
PACKING STOOLS
PAPER HOLDERS

Write for particulars of Equipment for preserving Citrus Fruits from BLUE MOLD, Etc. We supply for **PACKING HOUSES** and **INDIVIDUAL GROWERS.**

THE "LIGHTNING" FRUIT GRADER CO.

5 Hoddle Street, Collingwood, N.9, Melbourne

Cable, Telegraphic Address, "LIGHTNING," Melbourne VICTORIA



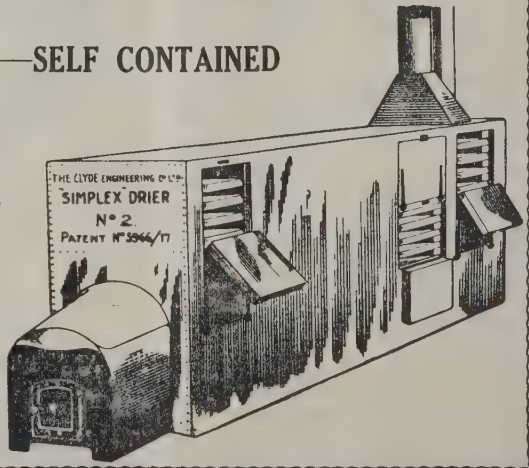
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ld.
GRANVILLE, N.S.W.

ning varieties of Peaches, Apricots, and Pears are grown, as well as 12 acres of Grapes. Two dressings, each consisting of 2 cwt. per acre of superphosphate, were used as manure, in addition to potash and lime. Against the codlin moth, two or three sprayings of arsenate of lead were given to William Pears, and four sprayings to later varieties. The Rutherglen bug infected the early Peaches, but smoking was found to check it.

Mr. E. A. Shelton has 15 acres at Orrvale, devoted to Peaches and Pears. The manure used is No. 1 Complete Manure (4 cwt. to an acre). Two sprayings of arsenate of lead—one in late December, and one in early January—was found to be sufficient against the codlin moth. Mr. Shelton did not consider smoking worth while against the Rutherglen bug.

HARDWOOD CASES

Truck Loads Shooks

Prompt Delivery.

8½D

Write to

C. H. MILLER

Timber Agent,

Hardware House,

386 P.O. Place,

C 11552. Melb.

Mr. A. Lees, of Shepparton, has 28 acres under Peaches, Pears, and citrus. For manure, 12 tons of lime is used yearly, and, in addition, 8-12 lb. per tree is given of a mixture of superphosphate, bone, and nitrate of soda. Mr. Lees considers two sprayings of arsenate of lead is sufficient against the codlin moth, if they are applied at the right time. To keep the Rutherglen bug from the fruit, Mr. Lees planted Lucerne among his trees; the bug then stayed on the Lucerne, and did not affect the fruit.

Mr. J. L. Holland, of Shepparton East, has 35 acres under Peaches, Apricots, Pears, and Apples. Mr. Holland is experimenting with manures, but the best results up to date seem to be achieved with superphosphate and sulphate of ammonia. Four sprayings of arsenate of lead are used against the codlin.

Mr. G. L. Bailey has 25 acres at Shepparton, under Peaches, Plums, and Apricots. The manure used is a mixture of potash, sulphate of ammonia, superphosphate, blood and bone. Five pounds of this mixture are given per tree. Rutherglen bug—Mr. Bailey finds that this pest breeds in the cavities caused by trees rocking in the wind, and if stirred out on a cold day, they cannot fly, and can be burnt, or otherwise destroyed.

Mr. C. A. Hornidge, of Ardmona, has 100 acres under Apricots, Peaches, Pears, Prunes, and Grapes The manure used consists of 4 lb. of superphosphate, and 1½ lb. of sulphate of ammonia per tree. Three or four sprayings were found effective against the codlin moth. Persistent smoking was found to get rid of the Rutherglen bug.

Mr. A. Price has 45 acres at Mooroopna, under Peaches, Pears, and Apricots. The manure used is 7 lb. per tree of bone and superphosphate, given at the end of August, then 2 lb. per tree later if the crop is heavy. An effective preventive against the Rutherglen bug was found in smoking with liberal quantities of tar and sulphur.

Mr. S. Towers has 90 acres at Mooroopna under Peaches, Apricots, Pears, Prunes, and vines. The manure used was 3 cwt. to an acre of bone and superphosphate. Three sprayings of arsenate of lead were used with good results against codlin moth. Mr. Towers states that his crop was saved from the ravages of the Rutherglen bug by giving three weeks' continuous smoking with tar, sulphur and straw.

Mr. P. O'Donnell has 12 acres at Shepparton East under Peaches, Apricots, Pears, and citrus. A top-dressing was given with Gypsum, and superphosphate was also used.

The manure for the citrus consisted of blood, bone and superphosphate (8-10 lb. per tree). Four sprayings of arsenate of lead were found satisfactory against the codlin moth, but smoking did not have any effect on the Rutherglen bug.

This season has been an exceptionally good one in regard to the few prevalent pests in the stone fruits.

Although a few growers were troubled with "thrip," the main scourge is the codlin moth in the Pears. Many growers consider this is the worst year for the codlin moth we have had, and others say it is getting worse each year.

AUTUMN SHOWS.

Castlemaine.

Lord Somers performed the opening ceremony at the Autumn Show of the Castlemaine and District Horticultural Society on the 11th April. Despite the prolific season, the display of fruit was disappointing for a town that is surrounded by orchards. Many classes failed to attract entries.

The Harcourt Supply Company had a big exhibit of Apples, the varieties shown being Granny Smith, Dunns, Jonathan, Delicious, Rome Beauty, and Esopus Spitzenberg.

Two non-competitive displays were staged by the Harcourt Fruit Supply and the Harcourt Fruitgrowers' Progress Association. These included both dish and tray exhibits of the better known commercial varieties, pro-

"LALLA"

A NEW VARIETY OF

APPLE

An Improved "Red Delicious."

Excellent Utility Type,
Attractive Appearance.

Grown by
Frank Walker, Launceston, Tas.

A limited number of trees available, so place your order early, and avoid disappointment.

Supplies Obtainable from

OSCAR NOBELIUS

Kia Ora Nurseries,
NARRE WARREN, VIC.

minent among which were Cox's Orange Pippin, Dunn's Favourite, and Esopus Spitzenberg. On a tray of Glou Morceau Pears were specimens of huge size, exceptionally clean in skin texture, and attracted considerable attention.

A remarkable exhibit was a tray of Reinette du Canada Apples, shown by Mr. L. Petsch, of Muckleford. The tree from which the exhibit was taken is seventy years old, and yielded 25 bushels of fruit this season.

PATENTS

GEORGE A. U'REN

PATENT ATTORNEY

"HEATY HOUSE." 499 LITTLE COLLINS ST. MELBOURNE.

MELBOURNE MARKETS.

Daily Opening of Victoria Markets.

Successful Operations.

A matter of some concern to fruitgrowers is the proposed transfer of the Western Markets to a site at the Victoria Markets. Negotiations are still in progress between the Melbourne City Council and the Government, but finality has not yet been reached.

Another matter affecting growers is the daily market now in operation.

Many doubts as to the success of this new innovation have been set at rest, according to Mr. G. B. Minns, the Melbourne City Council's Markets Superintendent, who states that since the daily market came into operation last January, the attendance of fruitgrowers and market gardeners had increased considerably. In January, the number who attended was 590. During February the figures had increased to 671. During March the numbers had jumped to 933, and the figures are increasing. These figures clearly prove that the idea of a daily market has caught on.

Friday is easily the best day for fruitgrowers, and, as many as 5,000 cases of Peaches were sold on one Friday during the glut of this fruit recently. Monday also proved a good day for the grower, and on a recent Monday 1,000 cases of fruit were disposed of by growers.

The Monday market at Adelaide had also proved successful, although the Wednesday and Friday markets have proved the best days.

The daily market at Sydney has also proved successful, but, as elsewhere, Friday is the busy day.

There is still a section of market gardeners who are opposed to the daily market, but Mr. Minns is convinced that those who now oppose the innovation, will eventually approve of it.

The fruitgrowers and fruit salesmen, as a whole, strongly support the daily market, because they have gained increased sales for the products of the orchard.

Suburban Deliveries.

Another innovation that has caught on at the Victoria Markets is the carriage of goods by the well-known firm of carriers—Mayne, Nickless Pty. Ltd. This firm now picks up goods at the market and delivers to the home of the purchaser. Goods handed in to the office of the market weighbridge before 9 a.m. will be distributed throughout the metropolis during the same day. Goods handed in after 9 a.m. until 1 p.m. will also be delivered on the same day within a radius of five miles of the city, and next day to homes outside that area. The cost of delivery is 1/- per case and ninepence per half-case.

This innovation should assist materially in solving the problem of despatch from the markets, and will benefit the producer, who will find a big increase in business. It should also assist in preventing the recurring gluts of produce.

VALUABLE NEW APPLE.

A Red Delicious—"Lalla."

Vivid Red Colour, Heavy Bearer: A Good Storage Variety.

Developed by Mr. Frank Walker at Lalla, Tasmania.

A new Apple, which is creating considerable attention, is a sport from Delicious, which appeared on Mr. Frank Walker's orchard at Lalla, Northern Tasmania. The new variety is appropriately named "Lalla."

The true "Delicious" type is maintained, and the fruit has uniform vivid red colouring. For richness of colour and general appearance, "Lalla" has outstanding merit. The variety has been tested for 10 years, and so it is known; the variety is an even and heavy cropper. It is a good cold-storage variety: the texture is slightly firmer than the original Delicious.

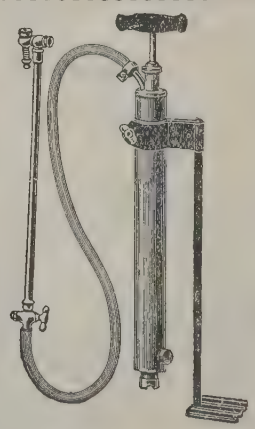
Tasmanian growers can secure trees direct from Mr. Walker; the Victorian agent is Mr. Oscar Nobelius, nurseryman, Narre Warren, Vic.

A TRIAL CALL.

"What is it?" asked the doctor who had been hurriedly summoned at midnight.

"Nothing this time, doc.," answered Newlywed, looking at his watch. "My wife just wanted to find out how soon you could get here in case the baby was suddenly taken ill."

FOR
SPRAYING, LIMEWASHING and DISINFECTING
RELIABLE AND EFFICIENT MACHINES ARE ESSENTIAL
Before Placing Your Order ASK A FRIEND
WHO HAS USED A
VERMOREL "ECLAIR" SPRAYER
TO TELL YOU HIS OPINION OF IT
ACTUAL USE IS THE BEST TEST



The types made include the following:—

HAND SPRAYERS
PNEUMATIC HAND SPRAYERS
KNAPSACK SPRAYERS
PNEUMATIC KNAPSACK SPRAYERS
BUCKET PUMPS
BUCKET SPRAYERS
SINGLE WHEELED SPRAYERS
TWO WHEELED HAND POWER SPRAYER
high pressure model (220 lbs. per square inch)
CART SPRAYERS
AUTOMATIC HORSE DRAWN SPRAYERS
POWDER BELLOWS
KNAPSACK POWDER SPRAYERS
AUTOMATIC HORSE DRAWN POWDER SPRAYERS
3 H.P. MOTOR SPRAY OUTFITS

LIQUID CAPACITIES 1¾ pints to 88 gallons. PRICES FROM 2/9 to £80 each

The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants.

Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—
COOPER, PEGLER & CO. LTD., 24d CHRISTOPHER STREET, LONDON, E.C.2.

(By "Syringa.")

Make Large Sowings Now of Onions—Their Cultivation.

IN ORDER TO GROW ONIONS to the greatest perfection, a rich, deeply worked and well-pulverised soil is necessary, with good drainage. They are strong-feed plants, and will require plenty of nourishment in the shape of manure, which should be buried about five or six inches below the surface.

Thoroughly decayed stable manure is the best dressing the soil can have, but if that is not to be obtained easily, bonedust or other powerful stimulants may be used instead, in moderate quantities. Unlike most other vegetables, the Onion may be grown in the same ground for several years in succession without impoverishing it, provided it receives manure in some shape or other.

In preparing the ground for a crop, it should be dug deeply, or, what is still better, trenched to the depth of from eighteen inches to two feet, as, though the bulbs are on the surface, the roots will penetrate that distance if there is sufficient soil to enable them to do so.

The seed should be

sown in shallow drills,

about a foot apart, covering it to the depth of half an inch. As soon as the young plants are about three inches high, they should receive their first thinning, leaving them standing from an inch and a half to two inches apart. When they have attained the height of six or eight inches, let them have another and final thinning, leaving sufficient space between to allow them to develop both bulbs and foliage properly. This will vary to some extent, according to the size the variety is likely to attain, but from five to eight inches apart will meet the wants of all kinds.

By sowing at this season of the year, the young plants have the advantage of getting a start before the very cold weather sets in, and they will keep steadily growing through the winter. This gives them a better chance of attaining a large size before the dry weather sets in than if sown late.

Though the autumn is the most favourable season for sowing for ensuring a good crop, yet seed may be sown at any time onwards to September. Sometimes the later sown crops turn out very well, but this result is entirely dependent upon a favourable season. In districts where the frosts are severe, as in cold or wet ground, sowing had better be delayed till early in the spring, as the young plants are apt to perish during the winter.

Planting Table for May.

Seed.	Depth.	Distance Apart. Rows.	In Rows.	Ready for Use.
Beet	1 in.	18 in.	6 in.	65 to 100 days
Broad Beans	2 ins.	3 ft.	9 in.	June-July
Broccoli	½ in.	2 ft.	12 in.	7 to 8 months
Cabbage	½ in.	3 ft.	18 in.	4 to 6 months
Cauliflower	½ in.	2 ft.	18 in.	6 to 8 months
Cress and Mustard	½ in.			3 weeks
Endive	½ in.	2 ft.	8 in.	65 days
Kohl Rabi	½ in.	3 ft.	9 in.	6 months
Leek	½ in.	14 in.	4 in.	6 months
Lettuce	¼ in.	18 in.	8 in.	65 days
Onion (Brown)	½ in.	1 ft.	6 in.	6 months
Parsley	½ in.	1 ft.	4 in.	4 months
Parsnip	½ in.	18 in.	9 in.	5 months
Peas	2 ins.	3 ft.	6 in.	3 to 5 months
Radish	½ in.	9 in.	2 in.	30 to 45 days
Spinach	½ in.	1 ft.	9 in.	4 to 8 weeks
Turnip	½ in.	18 in.	9 in.	2-2½ months

Plant Seedlings of Lettuce, Cabbage, Cauliflower, Beet, Celery, Brussels Sprouts, and Borecole. Set Shallots, Garlic, Potato and Tree Onions, also Herbs.

FERGUSONS' PEDIGREE FRUIT TREES

APPLES, PEARS, PEACHES, ALMONDS, PLUMS, CITRUS (All Sorts, Including VALENCIA, WASHINGTON, GRAPE FRUIT), PERSIMMONS, APRICOTS, CHERRIES.

Quality Prime for 1928. Satisfaction Assured. Get Our Prices. Catalogues Ready.

Established 1848. **F. FERGUSON & SON** Australian Nurseries.

Also at Camden. HURSTVILLE, N.S.W.

FRUIT TREES

ORNAMENTALS etc.

Large Quantities Excellent Quality

Catalogue free on application
1928 Edition now available

View of a portion of the Gembrook Nurseries.

A block containing 300,000 Apple Trees, including Delicious, Jonathan, King David, Stayman, Winesap, Gravenstein, Rome Beauty, Democrat, Dunn's, Granny Smith, Cleopatra, Rokewood, Yates, Five Crown, Glengyle, etc.

C. A. Nobelius & Sons Pty. Ltd.

Gembrook Nurseries, Emerald, Victoria.

Telephone: Box Hill 154

ORCHARD HEATING IN U.S.A.

According to Mr. Floyd D. Young, Meteorologist, U.S.A. Weather Bureau, there has been a rapid increase in the citrus acreage equipped with orchard heaters during the past five years. The freezes of January and February, 1922, demonstrated the need for frost protection, and the severe damage suffered in December, 1924, and January, 1925, resulted in the purchase of heating equipment for thousands of acres of Oranges and Lemons. In the Redlands district the increase in the protected citrus acreage during the season of 1925-26 was 118 per cent.

The writer goes on to state that "there has long been a demand for orchard heating statistics for the different citrus districts, but the large amount of work necessary to gather the information necessitated a delay in taking up the project until last winter. During the winter of 1926-27 the entire Fruit-Frost organisation of the weather bureau co-operated in making an intensive orchard heating survey. The districts covered do not include all the citrus acreage in California, but there is relatively little orchard heating in the districts not covered. The survey was made with the greatest care in all districts. In most instances the statistics were secured through personal interviews with the growers, with the assistance of the packing house managers.

Orchard Heating Statistics.

The percentage of the total citrus acreage protected with heaters is greatest in the Pomona district, with 59.4 per cent., and least in the Lindsay district, with 4.1 per cent. The Azusa district, with 54.3 per cent. of the total acreage protected, runs Pomona a close second. Of the subdivisions, the Walnut district has the highest score in protected acreage, with 86.6 per cent. of the total citrus plantings equipped with heaters. It is interesting to note that there was no heating in the Walnut district in 1922.

Only 22.07 per cent. of the total citrus acreage in all the Fruit Frost districts is equipped with heaters. Oil-burning heaters are used to protect 20.57 per cent. of the total acreage, the remaining 1.50 per cent. burning solid fuel Of the total protected acreage, 93.2 per cent. is equipped with oil heaters and 6.8 per cent. with solid fuel heaters.

In some districts large numbers of open heaters have been placed in use within the last few years, and growers have been known to replace the garbage cans with improved types of heaters. Open heaters give off a much denser and dirtier smoke than the improved types, and although they are cheap and are effective in raising the temperature, they usually coat a large proportion of the fruit with a greasy soot, which is difficult and sometimes impossible to remove at the packing house.

Growers have been known to lose 2/- per box on Oranges because of a reduction in grade due to a coating of soot from open heaters, which could not be entirely removed. In other cases, the unusually heavy scrubbing which the sooty fruit receives in washing has increased the percentage of decay in transit. The elimination of all open heaters in Southern California will benefit both the grower and the general public.

ADVERTISING FRUIT.

Railway Department's Enterprise.

The Victorian Railways Commissioners are performing invaluable service in assisting the fruit industry by sales at the railway refreshment rooms and by advertising.

Here are two slogans prominently displayed:—

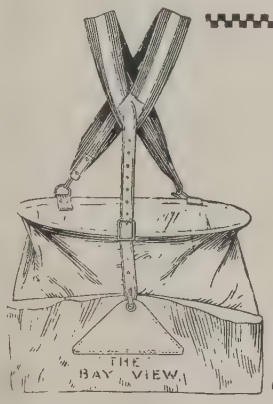
"Health and the fruit habit go hand in hand."

"Fruit fosters fitness—keep fit."

AN OFFSET.

"Why hasn't she made a rich marriage if 'her face is her fortune'?"

"Poor girl, she has a tongue that is her misfortune."



"BayView" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

Irrigation Hose in heavy Finest Scotch Duck

	A	B	C
3-inch	5d.	6d.	7d. per foot.
4-inch.	6d.	7d.	8d. „ „
5½-inch	7½d.	9d.	10d. „ „
7-inch	10d.	12d.	13d. „ „
9-inch	14d.	17d.	18d. „ „
11-inch	16d.	18d.	19d. „ „

HAY STACK COVERS

For Hay and Lucerne Stacks, etc.

	3-Star.	4-Star.
12 x 20	£2 3 0	£3 1 6
12 x 24	2 13 6	3 15 0
18 x 20	3 15 0	4 11 0
18 x 24	4 2 6	5 9 0
18 x 30	5 2 0	6 15 0
21 x 30	5 17 6	7 17 6

We can supply these covers in any length, 3 ft., 6 ft, and 9 ft. wide, suitable for covering drying racks.

Any other size at same rates. Ropes, 3/6 Extra.

Verandah Blinds, Window Blinds, Duck Tarpaulins, Tents, Camp Stretchers and all Classes of Canvas Goods.

Large Stocks of First-class Secondhand Sacks.

Please write for prices and samples.

WYETT MFG. CO. PTY. LTD.

21-23 BELLARINE STREET, GEELONG, VICTORIA.

'Phone 1688.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.

Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Davis, J., Western Market.
Dennys, Lascelles Ltd., Temple Court, Melbourne.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
Mills, J. B., & Co., Bank House, Bank Place Melbourne.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
F. B. Bolton.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Piesse & Co., C.

Launceston.

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.

Dennis & Cooper Ltd., Covent Garden.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salters Hall Court, Spitalfields Market, E.1.

Hull.

White & Son Ltd.

Manchester.

The Port of Manchester, rep., W. J. Wade, 8 Bridge Street, Sydney.

GERMANY.

Bremen.

Fruchthandel, Gesellschaft.

Hamburg.

Astheimer, P. H., & Son, Fruchthof.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

AUSTRALIAN AND NEW ZEALAND FRUIT IN ENGLAND AND THE CONTINENT.

American Competition.

According to a message dated the 14th April, fruit traders in England are disappointed with the prices realised for Australian and New Zealand Apples.

The low prices are attributed partly to the heavy supplies of good cheap Oranges, but the unexpected competition this week of America by dumping many thousands of cases of good quality "Oregon Newtowns" on the English markets has affected sales. Recently these Apples have been comparatively scarce, and of moderate quality, but the Americans apparently had reserved some of their best, to compete with our fruit.

LONDON.

Ex the "Narkunda."

Victorian Apples shipped per the "Narkunda" arrived at London in excellent condition, a few lacking colour. Prices (per case) for Jonathans realised, 15/- to 19/-; Alfristons, 15/- to 15/6; Ribstons, 15/- to 19/-; Dunns, 15/6 to 17/-; Gravenstein, 13/- to 15/-.

Ex the "Tainui."

New Zealand Apples, ex the "Tainui," realised 16/- to 17/- per case for Worcesters and Dunns; Alf., 14/- to 16/-; Gravenstein, 13/- to 15/-; Cox's, 22/6 to 27/6.

Ex the "Jervis Bay."

Of the Pears shipped by the "Jervis Bay," the Howells and Boscs were considerably wasty. Half-cases sold at 6/- to 7/-. The Anjous were in better condition, and realised 8/- per half-case.

Ex the "Northumberland."

New Zealand Apples, per the "Northumberland," arrived in excellent condition, prices realising, for Alfristons, 14/- to 16/- per case; Coxs, 22/6 to 27/6; Worcesters, 16/- to 17/-; Gravenstein, 13/- to 15/-; Dunn's, 16/- to 17/-.

Ex the "Cathay."

Apples shipped per the steamer "Cathay" generally were in good condition, but Coxs were considerably affected with bitter pit. Prices for **Victorian** Jonathans were 13/- to 15/- per case. **South Australian** Cleos., 13/- to 17/-; Jon., 10/- to 15/-; Grav., 9/6 to 10/6 Coxs, 14/- to 20/-; Tompkin, 11/- to 15/-. **Tasmanian** Alex., 8/9 to 11/-; New York, 10/6 to 14/6; Worcester, 10/- to 11/6; Mobbs, 9/3; Cox's, 12/-; Ribston, 9/- to 11/6; Aromatic, 9/3 to 10/-.

Ex the "Otranto."

Victorian Pears ex the steamer "Otranto," arrived in good condition. Prices realised were:—Bosc, 14/- to 17/-; Josephines, 18/6 to 21/-; and Winter Coles, 15/- to 15/6. Half-cases sold:—Packhams, 7/9 to 9/3; Clairgeau, 6/- to 7/-, and Caps., 5/6 to 6/6.

Ex the "Berrima."

Apples shipped by the "Berrima" were mostly over-ripe. Prices for **Tasmanian** Apples realised:—Ribston, 7/- to 10/6 per case; Alexs., 6/6 to 7/-; Worcesters, 7/- to 10/-; and Gravensteins, 6/-. **West Australian** fruit fetched 9/- to 10/- per case for Adam's Pearmain; Jons., 8/- to 11/-; Cleo., 13/6; Æsopus, 7/6 to 9/-; Baldwins, 7/- to 9/-; Dunn's, 14/-; Cox's, 10/6 to 15/-. The shipments of Pears by the Berrima were practically worthless.

Ex the "Port Huon."

Apples shipped from **Tasmania** per the steamer "Port Huon" realised the following prices:—Cleos., 13/- to 14/-; Cox's, 13/- to 15/-; Dunn's, 11/3; Worcesters, 11/3 to 11/9; Ribstons, 10/- to 12/-; others, 10/- to 11/-.

Ex the "Mooltan."

The Apple market improved: quality of fruit satisfactory. **South Australian** fruit per the "Mooltan" realised:—Jon., 12/- to 13/6 per case; Cleos., 13/- to 14/-; **Victorian** Dunn's and Jon., 12/-; Cleos., 13/-.

Pears.—**Tasmanian**, in trays, Bosc, 5/6 to 7/6; Comice, 5/- to 10/6; Beurre Clairgeau, 4/6 to 5/-; half-cases, Cap., 6/9 to 8/-; Bosc, 9/- to 12/- case; Vicar, 8/3 to 9/6.

Ex the "Runic."

Tasmanian Apples ex the "Runic" brought 8/- to 8/9 for Alexander: Ribston, 9/- to 9/3; Dunn's, 9/-; Cox's, 12/- to 14/-; New York, 14/-; Worcester, 9/3 to 11/-; Alfriston, 10/-.

Ex the "Huntingdon" and "Arawa."

New Zealand Apples ex the "Huntingdon" and "Arawa" brought 14/- to 18/- for Cox's; Dunn's, 10/- to 11/6. The demand for Pears is improving as South African supplies are diminishing. The "Huntingdon's" Winter Cole and Packham Pears, in trays, sold at 8/6.

LIVERPOOL.

Ex the "Berrima."

Some of the **Tasmanian** Apples ex the "Berrima" were railed to Liverpool, and the following prices were realised:—Cox's, 15/3; Worcesters, 10/6 to 13/6; Ribstons, 7/6 to 10/-; Alfristons, 12/9 to 13/-.

HULL.

Ex the "Ferndale."

Victorian Apples, per the s.s. **"Ferndale,"** realised:—Cleos., 15/- to 16/3 per case; Jon., 11/9 to 12/9; Dunns, 14/- to 14/6; Coxs, 16/- to 19/6; Londons, 12/- to 13/-; Reinette, 11/- to 12/6; Granny Smith, 23/-. **South** Australian Cleos., 15/6 to 16/9.

GERMANY.

Hamburg.

Ex the "Tekoa."

Apples shipped from **West Australia, per the "Tekoa,"** arrived at Hamburg rather immature, and much bitter pit was found in some varieties. Prices realised, for Cleos., 15/- to 20/- per case; Dunns, 16/- to 20/-; Jon., 15/- to 18/-. The Pears sold were:—Vicars, 9/- to 10/-; Packhams, 23/-; Howells, 21/6; Winter Coles, 15/-; Keiffers, 7/6.

Ex the "Horatius."

15,000 cases of Apples were sold at Hamburg, as follows:—Jon., 12/- to 15/-; Dunns, 18/- to 23/-; Cleos., clean, 16/- to 20/-; affected with bitter pit, 12/- to 16/-.

Messrs. Timm & Gerstenkorn, fruit brokers, Fruchthof, Hamburg, advises by cable dated March 30th, 1928, that the New Zealand boat Tekoa, which loaded Western Australian fruit at Fremantle, has arrived at Hamburg. The fruit is green and partly bitter pitted. West Australian Cleos. and Dunns realised 18/- to 20/-; Jonathan, 15/- to 18/-.

AUSTRALASIAN MARKETS.

NEW SOUTH WALES.

Sydney (17/4/28).

Mr. F. Chilton, City Fruit Markets, reports under date 17/4/28:—The markets are still being over-supplied with Apples and many other kinds of fruit are plentiful. The demand at present is fair, but as cooler weather is setting in, prices of Lemons, Grapes, etc., are likely to be affected. Bananas are very scare. Prices ruling as under:—Queensland Fruits.—Bananas: 18/- to 38/- per case. Pines, smooth-leaf, 7/- to 20/-. Custard Apples: 3/- to 7/- per half-case. New South Wales Fruits.—Bananas: 20/- to 42/- per case. Lemons: 6/- to 15/- per bus. case. Oranges: Valencia, 4/- to 9/-. Apples: Jonathan, Delicious, R. Beauty, 4/- to 7/-; other coloured varieties, 3/- to 6/-; Granny Smith, 7/- to 10/-. Pears: W. Cole and Packham, 7/- to 10/-; other dessert varieties, 5/- to 8/-; cooking varieties, 2/6 to 5/-. Quinces: 4/- to 6/-. Passions: 4/- to 8/- per half-case. Grapes: Black Muscat, 5/- to 9/-; black varieties, 3/- to 8/-; white varieties, 3/- to 7/-. Tomatoes: 4/- to 12/-. Persimmons. 2/- to 3/6. Victorian Fruits.—Pears: W. Cole and Packham, 6/- to 9/- per bus. case. Peaches: 6/- to 9/-. Apples: Jonathan, 4/- to 7/-. Tasmanian Fruits.—Apples: Jonathan, 4/- to 7/-; D.C., 4/- to 6/-; F.C., 6/- to 8/- Pears: W.C., 3/- to 5/- per half-case; B.B., 3/- to 4/-.

VICTORIA.

Melbourne (26/4/28).

The prices ruling at the Western Market are as follows:—Apples: Good to choice eating, 2/- to 4/- a case; good to choice cooking, 1/6 to 3/- a case. Grapes: 6/- to 10/-, and some special lines sold up to 14/- a case. Lemons: Victorian, 10/- to 14/- a case. Oranges: Queensland, 11/- to 13/- a case. Navel Oranges: Imported, 40/- a double case. Passion Fruit: 10/- to 18/- a case. Pears: 2/6 to 5/- a case. Pineapples: Queens., 16/- to 18/- a double case for best counts; smaller sizes sold at lower rates.

QUEENSLAND.

Brisbane (21/4/28).

Apples, Stanthorpe, eating Jonathan, 5/- to 7/- a case, cookers, G.S. 6/- to 7/-, C. 5/6 to 6/6. Lemons: 1/6 to 3/6 a half-bushel case. Limes: 1/6 to 3/6. Pineapples: Rough leaf, 1/- to 7/- a dozen; 8/- to 12/- a case; smooth leaf, 1/6 to 5/- a dozen; 6/- to 8/6 a case. Passion fruit, 6/- to 12/- a half-case. Grapes: P.C., 4d. to 5d. a lb.; B.M., 4d. to 5d.; W.C., 3d. to 5d.; G.C., 2/- to 3/6 a case; Muscatels, 2/6 to 5/-; Custard Apples, trays, 1/6 to 3/-; dumps, 2/- to 3/-. Oranges: Ordinary, Howard 5/- to 7/-; Redland Bay, 5/- to 9/- a bushel case; navels, Redland Bay, 8/- to 12/-. Mandarins, Howard, 12/- to 14/-; Redland Bay, 12/- to 15/-.

TASMANIA.

Hobart (14/4/28).

Apples, N.Y.P., good, 3/6 to 4/6; small and marked, 1/6 to 2/6; L.S., 2/- to 3/6; small and soft, 1/- to 1/9; A.P.M., 1/6 to 2/6; R.P., 1/6 to 2/6; T.P., 2/- to 2/7; H.P., 1/6 to 2/6; Jon., 2/6 to 4/-; small, 1/- to 2/-; S.L., 1/- to 2/3; C.O.P., 2/- to 3/3; small and soft, to 1/6; Alex., 1/6 to 2/9; Alf., 1/6 to 2/9 per case. Pears: B.B., 1/- to 3/-; O.B., 1/- to 2/-; W.C., 1/- to 3/-; N.P., 1/3 to 2/- per case.

SOUTH AUSTRALIA.

Adelaide (19/4/28).

Apples (eating): 4/- to 6/- per case; do. (cooking), 3/- per case. Bananas: 32/- to 34/- per crate. Grapes (dark): 9/- to 10/- per case; do. (white), 8/- per case; do. (Muscatels), 8/- per case. Lemons (green): 10/- per case. Oranges: 12/- to 16/- per case. Pears (eating), ripe, 5/- per case.

WEST AUSTRALIA.

Perth (17/4/28).

Apples: Dunn's, flats, 6/- to 8/- (special to 9/6 and others from 5/-); dumps, 10/- to 14/- (special to 15/- and others from 7/-); Cleos., flats, 5/- to 7/6 (special to 10/3); dumps, 10/- to 12/6 (special to 15/- and others from 6/3); Jon., flats, 8/6 to 11/6 (others from 7/-); dumps, 10/- to 15/6 (special to 18/-, extra to 20/6); Granny Smith, flats, 7/- to 10/-; dumps, 12/9 to 16/- (special to 17/- and others from 8/9); Delicious, dumps, 13/- to 16/- (others from 6/); Romes, flats, 6/- to 9/6 (special to 13/-); dumps, 9/- to 13/- (special to 16/3). Pears: Bartlett, flats, 8/6 to 10/6 (others from 5/-); dumps, 8/- to 12/6; other varieties, flats, 4/- to 7/6 (others from 2/6); dumps, 4/- to 8/9 (special to 10/- and others from 3/-). Oranges: Flats, 10/- to 15/- (special to 17/- and others from 5/-). Navels, flats, 9/3 to 14/6 (special to 15/6 and others from 8/-). Grapes: Muscatels, open, 8/- to 11/6 (special to 13/6 and others from 6/6); other varieties, open, 8/- to 10/6 (special to 14/- and others from 4/6). Lemons: Flats, 4/- to 8/6 (special to 10/- and others from 2/-). Passion Fruit: flats, 20/-; half dumps, 13/- to 16/6.

NEW ZEALAND.

Dunedin (20/4/28).

Reilley's Central Produce Mart, reports, under date 20/4/28, as follows:—

Consignments of Adelaide and N.S.W. Grapes, which realised 18/- to 24/- per case, equal to 10d. per lb.; local Grapes are realising 1/6; Gros Colmars, 1/3. Peaches are almost finished, choice fruit crates realising 8d., and choice crate Plums, 5½d. to 6d. Pears are in full supply, and prices range from 8/- to 10/-, per 40 lb. case. Apples, Coxes, are almost finished, choice samples realising 14/6; Delicious, realising 10/-; while 9/- is the best price obtainable for Jonathans. American Oranges met a keen demand at 47/6, and we expect the first Navels from Australia to realise about 24/- to 27/- per gin case. American Grapefruit realising 37/-, and American Lemons, 60/-. Passion Fruit is still arriving from Auckland and selling at 10/- to 12/- per quarter case.

FIGHTING INSECT PESTS IN THE ORCHARD.

Black Aphids of Citrus Trees.

These small black aphids are now exceedingly numerous on the young tips of Orange and Lemon trees. They are easily destroyed by spraying with nicotine sulphate, 1 oz. to 5 gallons of water, with ¼ lb. soap added.

Codlin Moth.

Remove hessian bands and destroy hibernating larvæ underneath same. Bands should be dipped in boiling water, and then replaced on trees. Scrape away any loose bark that is likely to shelter codlin grubs. Destroy weeds around trees. Pick up, burn, or feed to pigs, horses, etc., all fallen Apples and Pears.

Painted Apple Moth, Light-brown Apple and Looper Caterpillars.

Owing to the continued warm weather, the caterpillars of these moths are very numerous in orchards. The larvæ of the light-brown Apple moths cause damage to the late Apples, such as Yates. The other caterpillars destroy fruit spurs of Apples and other fruit trees. Spray with arsenate of lead.

Harlequin Fruit Bugs.

Sometimes called "Soldier Bugs." These plant bugs insert their rostrum or beaks into the Apples, causing brown spots to appear, and to give the Apples a bitter taste. Spray with tobacco water, tar-impregnated water, phenyle and soap sprays.

Apple Pinara or Snout Moth.

These insects formerly fed on the leaves of Wattles, especially Black Wattles. In recent years they have become an orchard pest, and at the present time are more numerous than for some time past. They are particularly destructive to fruit spurs of Apple trees. Spray with arsenate of lead, 1 in 25.

Bryobia Mite, Red Spider (Mite).

Owing to the favourable weather, these mites have appeared in large numbers, and are turning the leaves of fruit trees a silvery colour. Use nicotine sulphate or black-leaf 40, or a weak oil spray. Spray underside of leaves.

Vine Moths.

The caterpillars of vine moths are exceedingly plentiful at present, and if spraying is not done at once many vines will be completely stripped of leaves. Spray with arsenate of lead, 1 in 25.

Orange Butterfly, Loopers, and Woolly Aphids.

See "The Fruit World," April, 1928, p. —.

SUPPOSING Fertilisers weren't needed . . . . . what a lot of money would be saved. Under PRACTICAL conditions a lot of money would be lost if only one of those fleeting temptations to make a cut in the fertiliser bill were obeyed.

NITROGEN, once thought of little consequence in Australian agriculture, is now recognised as an important element of plant food, though there is still a lot of money being lost because the value of Nitrogen is not more widely appreciated.

Use more Nitrogen. Ask your fertiliser agent about SULPHATE OF AMMONIA. That's Nitrogen in its ideal form . . . . . obtainable now in a "neutral" condition—dry, non-caking, and free-running.

Literature from

THE METROPOLITAN GAS COMPANY,
196 Flinders Street, Melbourne.
Telephone: Central 8162.

SA 1/28

EFFECTIVE SPRAY PISTOL.

Fruitgrowers who have tried the Edgell patent spray pistol, have nothing but praise for this economical attachment. The use of this pistol saves ½ cwt. of arsenate of lead during a week's spraying, according to some growers who use it. It is worked by one hand, leaving the other free to handle the hose. It does its work quickly, and will drive a spray clean through the densest foliage, or cover the tree with the finest mist. Any character of mist or jet spray can be adopted in a moment, and will remain so until it is intentionally altered by the operator.

The agent for this handy contrivance is Mr. T. W. Sands, 372 Lonsdale-street, Melbourne, Victoria.

TIN CONTAINERS BEST.

Dr. J. C. Ashton, of Hertfordshire, England, in a letter to the London "Morning Post," advocates the use of tin containers for jam, fruits, etc. Glass containers, he declares, contain minute air bubbles, which may harbour lead and arsenic.

These air bubbles are very easily broken, and in consequence, minute particles of glass get into the fruit. These, combined with the lead and arsenic (which two independent investigators recently discovered in 60 per cent. of the cheap glass vessels they examined), may easily cause the gastric disorders which from time to time mystify the medical profession in England.

The chief advantage of tin, he states, is that it sterilises the food effectively, and the process of canning employed in the modern scientific factory makes tinned fruit as decay-resisting and germ-free as possible.

PROFITABLE FRUIT GROWING.

Developments in New Zealand.

Research Work Necessary in Plant Breeding, Bud Selection, and Fruit Tree Stocks.

Address by Mr. T. W. Attwood.

Mr. T. W. Attwood, the President of the New Zealand Fruit Growers' Federation, recently delivered an interesting address on "Profitable Fruit Growing," before the annual conference of the N.Z. Horticultural Trades' Association.

Mr. Attwood stated that early export shipments of fruit from New Zealand were mostly to the Argentine, and the fruit was sent as ordinary cargo. This has all changed now. Cool storage, modern equipment, and scientific research had changed the whole aspect of the industry. The shipments now go, for the most part, to England, and all of them are sent in the coolers. The quantity exported has steadily increased, backed by the assistance of a Government guarantee to the growers, on which they have been able to finance—until this year, 1928, the bookings were about 900,000 cases, and might reach near to the 1,000,000 mark.

Following the work of the nurserymen in urging a

reduction of varieties,

a number of Varieties Conferences were held, at which the whole problem was discussed between the officers of the horticultural division, the nurserymen, and the Fruit Growers' Federation, with most beneficial results. Many varieties have been eliminated by steady working over to more approved sorts. All this has taken time.

To-day there are perhaps 50 varieties in the commercial orchards. But these are still too many, and notwithstanding that New Zealand has a worldwide reputation for her fruit, there is still much to do before the export trade will pay as it should.

Up-to-date Methods.

The introduction of modern methods and machinery into the cultivation, spraying, grading of the fruit, packing and all the incidentals of the orchard operations has simplified the grower's problems and his battles with the pests and diseases, till it is safe to say that he does not fear and dread the possible arrival of the say 200 other pests that are awaiting their passport as he once did of two of them.

Continuing, Mr. Attwood states, "Progress along modern lines is being made very fast, in fact I know of some orchards where the varieties have been reduced to five or six and the whole of the operations in connection with the business is conducted on the lines of a modern factory.

Future Prospects.

"The future of the industry is in the hands of those who visualise continued improvement and progression; there can be no finality. Not only must there be progress on the lines we have followed, but the varieties must, by selection, be kept up to standard, and where possible be improved.

"We hear of Improved Delicious, Improved Sturmer, and other sorts. What we need are research stations and plant breeders, and Bud selectors, cross pollenisation and the breeding of new types which shall be as far ahead of the present choice Apples, as they are ahead of the old wild crab.

"The stock question must be exploited, and the chosen varieties must be worked on the root stock most suited to them in the different soil conditions. Nothing must be left to chance. The working of pedigree trees must continue, working only the Best, from the Best, on to the Best Stocks, till propagation will only be allowed from performance record trees. Then, and then only, will commercial fruit growing really prove profitable. Fruit growing today is a man's job. It is highly scientific."

"VOLCK"

WHITE OIL EMULSION

THE NEW QUICK BREAKING OIL SPRAY FOR CITRUS AND DECIDUOUS FRUIT TREES

"VOLCK" is a patented oil spray.

"VOLCK" is manufactured by the California Spray Chemical Co., at Watsonville, California, U.S.A., by a highly-trained staff of CHEMISTS and ENTOMOLOGISTS, and is the result of many years study of the action of SPRAY OIL from the insecticidal and toxic standpoint on scale and insects affecting citrus and other fruit trees.

"VOLCK" DOES NOT BURN THE FOLIAGE.

"VOLCK" CAN BE USED DURING ANY WEATHER TEMPERATURE.

"VOLCK" does not require the addition of any soaps or other emulsifying agents.

"VOLCK" is a perfect emulsion which mixes readily with water and remains emulsified without forming any globules of free oil.

"VOLCK" will kill every Black and Brown Scale it hits, and is more effective than any other known Oil Emulsion for the destruction of Red Scale.

THIS IS THE TIME TO SPRAY.

Spray for Red Scale now, and for Black and Brown Scale in the months of March and April, when the growing scale have emerged from the eggs.

"VOLCK" is used at 2 PER CENT. strength.

"VOLCK" MAY NOT BE AS CHEAP as other oil emulsions, but it is more effective, and is absolutely safe for any grower to use under any weather conditions.

Write for literature regarding VOLCK.

VICTORIA:

H. C. PANNIFEX & CO.,
26 Market Street, Melbourne.
Telephone: 7375, 7376.

QUEENSLAND & NEW SOUTH WALES:

AUSTRALIAN FRUIT & PRODUCE CO.,
Fruit Exchange, Sydney;
and at Newcastle and Brisbane.

MAY GARDEN HINTS.

For May Plantings.

Vegetable Seeds.—Beans (Broad), Beetroot (early sorts), Cabbage (early sorts), Endive, Garlic, Herbs, Kohl Rabi, Leek, Lettuce, Mushroom Spawn, Mustard, Onions (Brown varieties), Parsley, Parsnip, Peas, Potatoes, Potato Onions, Radish, Shallots, Tree Onions, Turnips, Herb plants and roots.

Flower Seeds.—Antirrhinum (Snapdragon), Bellis Perennis (double Daisy), Calendula (broad-leaved Marigold), Calliopsis, Candytuft, Carnations, Dianthus, Gaillardia, Geum, Godetia, Gypsophila, Heliotrope, Larkspur, Linaria (Toad Flax), Lobelia, Marigold, Mignonette, Phlox, Poppies (all varieties), Scabious (Pin Cushion), Statice (Sea Lavender), Sweet Peas, Verbena, Wallflower.

Bulbs.—Agapanthus, Alstroemeria (Peruvian Lily), Anemone, Babiana, Calla (Arum Lily), Canna, Daffodil (Narcissus), Freesia, Gladioli, Hyacinth, Iris (Beard Flag), Ixia, Lilium gloriosa (the Climbing Lily), Lily of the Valley, Montbretia, Ornithogalum, Pancratium (Hymenocallis), Ranunculus, Sparaxis, Valotta (Scarborough Lily), Watsonia.

Plants.—Carnations, Pelargoniums (Geraniums), Pentstemons, Roses, Violets.

Trees and Shrubs.—All fruit trees, Citrus fruits, English trees, hedge plants, Loganberries, Pines (for shelter), shrubs, Strawberry plants. All deciduous trees may now be put in. Lawn grass.

Notes for May.

THE VARIOUS SEEDLINGS sown in March will be now growing rapidly and should be carefully tended. If too thick, thin out or transplant into boxes. Sturdy plants can only be grown by affording them space, light and air while they are young. As soon as large enough to transplant, they should be put out in their permanent quarters.

This is the month to order Violets and re-make old beds. Planted now, they become established at once.

Deciduous fruit or ornamental trees may now be ordered.

Also Asparagus and Rhubarb may now be planted. Strawberry beds should be planted before the end of the month, if not already in. A sowing of early Peas may be put in.

A GARDENER'S BIRD FRIENDS.

Orioles and Kurrawongs.

(By "Correa," in the "Garden Lover.")

THESE TWO BIRDS, so musically named, are well-known as lovers of fruit, and as such are doubtless unwelcome to many gardeners, yet we count them our friends even, while we do not deny that they are at least as fond of fruit as we are. But we find fruit alone a very incomplete diet, and so do they.

Orioles (Oriolus sagitatus) are particularly fond of figs, and usually discover the first ripe ones before we see them. They proclaim their presence triumphantly, naming themselves in sweet, liquid notes, "Ori-ori-o-le-e," or chattering in varied notes, that sometimes resemble those of a Rosella, and sometimes seem like one of the phrases of the Pied Kurrawongs.

They are very beautiful, either in flight or as they feast upon the purple figs; yet while they are among the leaves they are inconspicuous. A movement of a striped breast, a flick of dull green wings, or a sudden flash of eye, ruby-red and ruby-bright alone reveals their presence.

But they are not always among the fruit. They are equally

fond of Vine-moth caterpillars

and hard-coated beetles. The destruction of the caterpillars is an especial gain to us, for, unchecked, they strip every leaf from the vines, and very few birds will touch them.

"Jays," "Grey Maggies," and Grey Bell-magpies are all familiar names for the commonest Victorian Kurrawong. Until lately, Bell-magpie was the correct name, but it has now been altered to the more euphonious Kurrawong.

Grey Kurrawongs (Shefera versicolor) and Pied Kurrawongs (A. graculina), are well known to orchardists. Though sometimes nomadic, they frequently remain in one district for many years.

In the autumn they find abundance of fruit and enjoy it, but during the remainder of the year they eat both insects and seeds. They like Wattle seeds and Pepper berries, and even ivy-berries, but they spend much time also searching for insects in the bark of trees and on the ground.

A chorus of strange notes, not unmusical, guides one to their feeding-ground. One fruitgrower describes it as a derisive threat—"Coming-again-to-morrow." But I should call it not a threat, but a promise.

FRANK WALKER

Can offer all leading Export varieties of Apples worked on Seedling stocks, clean vigorous yearlings.

Our New Apple **LALLA** is available for 1928 Season.

Growers of Apples who have not seen this fruit are invited to ask for a sample Fruit Post Free, it stands alone at the top for quality.

PARTICULARS ON APPLICATION

110 BRISBANE STREET, LAUNCESTON, Tasmania.

Orchard and Vineyard Spraying.—For attacking many pests tobacco sprays are essential. The nicotine sulphate manufactured by A. Victor Leggo & Co., is made in Australia, from Australian tobacco. It is guaranteed to contain 40 per cent. nicotine. Users of this preparation speak very favorably of its effectiveness. Other preparations manufactured by this Company are, Bordeaux mixture, arsenate of lead (powder and paste), lime sulphur, red spraying oil, atomised sulphur, etc. Bordeaux mixture is supplied in handy packets for making in a few minutes a chemically correct spray, thus doing away with the slacking of lime and the dissolving of bluestone and spreader. Cyanogas (calcium cyanide) is also obtainable from this firm. Further particulars can be found in their advertisement in this issue.

WHAT WE MAKE IT.

Is it not just as we take it,
This mystical world of ours?
Life's field will yield, as we make it,
A harvest of thorns or flowers.

A. Carey.

Are You a
"Garden Lover"?
If so
Write for Sample Copy
to
Garden Lover
Bank House,
Bank Place,
Melbourne

GRUBBING
Thousands in Use
It earns its Famous LOW PRICE in a Few Days
Write for Catalogue
WITH A
"DIGGER" WINCH
A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days
QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

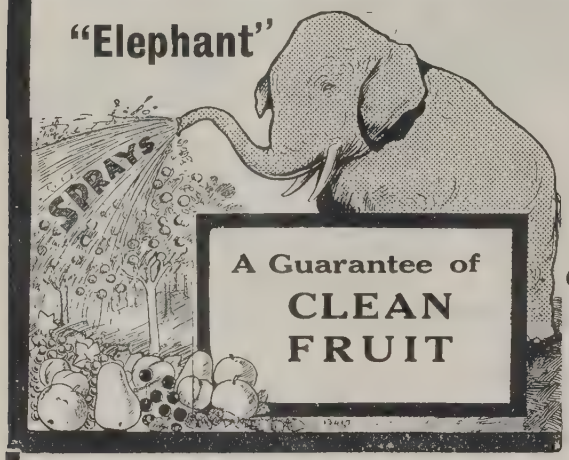
SUPPORT CO-OPERATION
By Consigning your FRUIT to the
Producers' Distributing Society Ltd.
(Late Coastal Farmers' Co-operative Society Ltd.)
Agents for
"BLACK LEAF 40"
and all Orchard Requirements
Melbourne Sydney
Newcastle Hobart
Launceston Devonport

Here at Last!
PATERSON'S CONCENTRATED
"CLENSEL"
British Product.
INSECTICIDE and FUNGUS DESTROYER.
THE ONLY COMBINATION SPRAY IN THE WORLD.
The Spray that has achieved Remarkable Results throughout England and India.
Write for Particulars of Results of Tests by Australian Fruitgrowers.
Once Tried, Always Used.
Eradicates on contact Red Spider, Scale, Thrips, Curly Leaf, Green Fly, Black Rot, Mildew, etc.
Non-poisonous. Non-injurious to trees or foliage.
"CLENSEL" can be used any time of the year.
Easily mixed. No other spraying solutions to be added. Badly infected orchards can be effectively cleaned with two applications of CLENSEL.
Further particulars from—
CLENSEL PTY. LTD., 184 Queen Street
C 2654. MELBOURNE

Fruchthof-Bremen

Fruchthandel Gesellschaft
Scipio & Fischer
Fruchthof BREMEN Germany
Cable Address: "Orange" Bremen . . . Established 1902

AUSTRALIAN REPRESENTATIVES:
Victoria: The International Fruit & Mercantile Co., 410-416 Flinders Lane, Melbourne.
West Aust.: Messrs. Paterson & Co., Ltd., Perth.
Tasmania: Messrs. E. R. Cottier & Co., Hobart.



ORCHARDISTS

Spraying is essential, and your best Insurance. Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand

Sprays Only

NOW IS THE TIME TO ORDER YOUR SPRAYS.

Use "Elephant" Brand

Prepared Red Oil

Manufactured from a heavy bodied mineral oil, combined with ingredients only necessary to bring about a perfect emulsion when mixed with cold water.

THIS OIL CONTAINS 85% PURE MINERAL OIL.

also

Prepared Crude Oil

ORDER NOW.

NICOTINE SULPHATE (Black Leaf 40)	BORDEAUX POWDER	ARSENATE OF LEAD (Paste and Powder)
LIME SULPHUR	BORDEAUX MIXTURE SOFT SOAP	BLUESTONE

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of "Elephant" Brand Sprays

Manufacturing Chemists, MADDEN GROVE, BURNLEY, E.1., MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for June, 1928.

Illustrations.

Berry Growing at Kalorama, Victoria 212
Interstate Citrus Conference 215

Subjects.

Beekeeping Notes 243–4
Canned Fruits 234–5
Citrus Conference: Interstate 213–8
Citrus News and Notes .. 218–9
Canadian Case for Apples and Oranges 219
Dried Fruits Department .. 230–1
Dehydration Machinery 219
Editorial Chats 220
"Fruitgrower Plumps for Compulsion" 223–4
Insect Pests in the Orchard 237
Letters to the Editor 220–2
Markets: British, Foreign & Australasian .. .. 248–xv.
New South Wales News and Notes 232–3
Notes in Brief 238–9
Orchard Spraying Outfit .. 240
Pruning: Where Are We Now? 211–212
Potash for Orchards 247
Personal 224
Peas: Garden 231
Poultry Notes 243
Queensland News and Notes 227–228
South Australia: News and Notes 226
Tasmania: News and Notes 225
U.S.A. Regulatory Acts 241
Vegetable Culture 245
Victoria: News and Notes .. 233–236
Victoria Market 222
West Australia 229

INDEX TO ADVERTISERS.

Books, Publications—
"Garden Lover," Bank House, Bank Place, Melbourne, p. xxv., xiii.
"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii.

Canning Machines—
Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. xi.
Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—
Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—
"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. 239.

Dusting Machines—
Atomol Dusts Ltd., Dumphries Place, Adelaide, p. xxii.

Fruit Buyers—
Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xx.

Fruit Tree Suppliers—
Brunning, John, and Sons, Somerville, p. 240.
Ferguson, F., & Son, Hurstville, N.S.W., p. 246.
Lawrey, J. W., Yarra Glen, Vic., p. 247.
C. A. Nobelius & Sons, Emerald, Vic., p. xviii.
Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 241.
Two Bays Nurseries, Moorooduc, Vic., p. xxii.
Walker, Frank, 110 Brisbane Street, Launceston, Tas., p. 235.

Fruit Graders—
"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood Vic., p. 244.
"Ellis," D. Harvey, Whitehorse Road, Box Hill, p. xxi.

Fruit Picking Bag—
The "Bay View," F. R. Mellor, 440 Elizabeth St., Melbourne, p. 235.

Manures, Fertilisers, &c.—
Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. 237.
Bone Dust, P. Fitzgerald & Sons, Warragul Rd., Oakleigh, Vic., p. 231.
"Nitrophoska," "Urea," Dyes & Chemicals (Aust.) Ltd., Sydney & Melbourne, cover i.

Orchard Ploughs, Cultivators, &c.—
D. Harvey, Box Hill, Melbourne, p. xxi.

Orchard Requisites—
McPherson's Pty. Ltd., 582 Collins St., Melbourne, Vic., p. 245.

Patent Attorney.—
Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. 244.

Poultry—
Karswood Poultry Spice, Agents all States, p. 242.

Refrigerating Machinery—
Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—
Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xix.

Spray and Dusting Material—
"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. iv.
"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.
"Elephant" Brand, Jaques Pty. Ltd. Madden Grove, Burnley, Vic., p. xiv.
"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.
"Clensel," Clensel Pty. Ltd., 184 Queen St., Melbourne, p. xiii.
Dusting Powders, Atomol Dusts Ltd., Dumphries Place, Adelaide, p. xxii.
"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.
"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. xiii.
"Black Leaf 40," Producers' Distributing Soc. Ltd., Sydney, p. 232.
Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. ix.
"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 232.
"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 229.

Spray Pumps and Guns—
"Bave-U" Power Sprayer, Russell & Co., Box Hill, cover ii.
"Cooper," Cooper Engineering Co. Ltd., Sydney and Melbourne, p. xi.
604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. v.
Ronaldson Bros. & Tippett Pty. Ltd., Creswick St., Ballarat, p. xvii.
Spray Pumps, etc., Cooper Pegler & Co. Ltd., 24d, Christopher St., London, E.C.2, p. 238.
"Sunshine Sprayer," H. V. McKay Pty. Ltd., Sunshine, Vic., p. 246.

Strapping Fruit Cases—
Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.
"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. xx.

Transport—
London and N. E. Railway, Burns, Philp & Co., agents, p. v.

Tree and Stump Pullers—
Trewhella Bros., Trentham, Victoria. Stumping Jacks, etc., p. ix.
"Digger," Quick Manufacturing Co., 74 Pender St., Thornbury, p. xiii.

Fruit Trees

for 1928 Planting

APPLES	QUINCES	CHESTNUTS	OLIVES
PEARS	FIGS	GOOSEBERRIES	GUAVAS
PLUMS	CHERRIES	CURRANTS	BRAMBLES
PRUNES	WALNUTS	RASPBERRIES	LOQUATS
ALMONDS	ORANGES	NUTS	PERSIMMONS
APRICOTS	LEMONS	MEDLARS	VINES
PEACHES	MANDARINS	POMEGRANATES	STRAWBERRIES
NECTARINES	MULBERRIES	PASSIONS	RHUBARB
			LOGANBERRIES

All Leading Varieties from—

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 1866

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices where copies and full particulars are obtainable) are as follows:—

HEAD OFFICE:

Bank House, Bank Place, Melbourne, Victoria

Representatives in all States and New Zealand.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

American Office: S. D. McFadden, Pacific Bldgs., Market Street, San Francisco, Cal., U.S.A.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

THE ORIENT COMPANY'S PRIZES.

The winner of the first prize given by the Orient Line in the competition for Australian Apples, was won by the Hon. W. H. Calvert, M.L.C., Tasmania.

This competition was run in connection with the Easter show of the N.S.W. Royal Agricultural Society, and the judging took place at Covent Garden, London, on May 15th. There were 50 boxes of fruit entered for the competition, which resulted as follows:—

Hon. W. H. Calvert (Tas.), 97½ points, 1; W. S. Cripps (N.S.W.), 94 points, 2; Morris and Son (N.S.W.), 92½ points, 3; H. Bird (N.S.W.), 91½ points, 4.

The judges were:—Messrs. Munro, of George Munro Ltd.; W. Greenwood, of Keeling and White Ltd.; and W. Ravenhill, of Pouparts Ltd. In the opinion of these judges, the exhibits were equal to the highest standard ever received from Australia.

The proprietors of Selfridge's Stores bought the whole of the exhibits, and displayed them to great advantage in the windows of their huge Oxford-street (London) establishment.

Where Are We Now On Pruning?

An Interesting Survey.

Australian and American Methods Compared.

THE PRUNING of fruit trees is a subject of perpetual interest. Much of value has been published from time to time in the "Fruit World" for Australian conditions. Experiences vary in different districts. Fruit varieties assume varying characteristics because of stock, soil, altitude, and cultural methods.

Presuming that the reader is familiar with the general principles underlying the work of pruning, the following comparative notes from America will be found of interest.

New ideas on the subject of pruning and new light on an old subject is always of interest and value. For these reasons, the following notes, republished from "Skookum News," Wenatchee, U.S.A., will be found interesting. The writer, Mr. Roy Larsen, gives his experiences as follows:—

NO ONE ORCHARD PRACTICE is done in such a variety of ways as is pruning. Furthermore, no one orchard practice has "changed style" as often as pruning. If these statements are true, WHY? Is it because each different orchard requires different pruning or because we just all have different ideas on pruning, and change our ideas often?

Personally, I believe pruning has been the least understood of any one orchard practice, and yet is the one practice more than any other that can most quickly and completely change the quantity and quality of fruit produced. I believe I am safe in saying that "no one orchard practice has limited production and lessened quality as has the pruning that has been done since our orchards were planted." The latest ideas developed in pruning in recent years will bear this statement out, I am sure. Still, I feel we have something yet to learn about pruning.

In this brief article I do not intend to try to tell "All About Pruning," but merely wish to emphasise a few principles that I believe are good to tie to. We all realise each orchard, and, in fact, each tree, is a special problem in itself.

Necessity of New Fruiting Wood.

The first principle I wish to emphasise is the NECESSITY of DEVELOPING NEW FRUITING WOOD IN OUR TREES. Any program we adopt should have this "plank' in it, I am sure. We can not expect to maintain high production of regular crops without a program that will continually produce new fruiting wood. This new fruiting wood may be stimulated either by pruning or by soil improvement or both. Personally, I think a combination of both is best.

Tree Spacing and Framework.

Late years we have been concentrating on "proper tree spacing" and the "proper spacing of the big structural wood within each individual tree." A great deal of improvement has been made in our orchards by working on this program. However, it is time now to concentrate on the "actual fruiting spurs, twigs and branches" on this structural wood. In other words, we need every last foot possible of this structural wood producing Apples. I am sorry to say that by the system of pruning now being practised in many orchards twenty-five to thirty per cent. of the possible fruiting area of the tree is "unproductive," and the remaining area of the tree is only functioning about fifty per cent. We should strive for greater production on each and every tree in the orchard, particularly where we have but few trees per acre, because of removing filler trees. I still firmly believe that good tree spacing is the first initial step toward high yields of high quality fruit; and low, wide spreading trees that can be economically sprayed, thinned and harvested. But, with fewer trees per acre, it is of vital importance that each tree be healthy, strong and of the highest possible productive capacity.

How to Develop New Fruiting Wood.

Too often pruning consists of cleaning out all of the inside one year (sucker) growth and most of the one year upright shoots on the laterals. The old fruiting twigs and spurs on the underneath side of the branches are saved and such wood gradually becomes less active; less productive and productive of under-size fruit. Each year we grow a big crop of new, upright wood to be pruned off the next winter and, furthermore, no programme will produce poorer quality fruit than such a programme as this. By such a programme, we not only grow Apples on the poorest wood in the tree, but we have the fruit in the poorest position for good colouring and early harvesting with a mass of new succulent, upright growth for shade. We should conserve and maintain all this new wood possible not only on all our fruiting laterals, but on the leaders, too. Often the main lateral terminal may be eliminated to an upper-newer limb which will gradually assume the approximate position of the limb removed. This is what is known as the "high renewal system" of fruiting wood. We should continually endeavour to replace old fruiting wood with new fruiting wood, and in cases where this is not possible we must often resort to heading in or cut-

ting back to reinvigorate the fruiting branch to the extent of producing new wood or new spur growth.

Heading-in Again Necessary.

Contrary to late ideas on pruning, but in accordance with the pruning by a number of successful growers, I firmly believe that we are coming back in a measure, at least, to more "heading-in" on older drooping wood with new top wood, and to invigorate old fruiting twigs that have several times the number of buds they can reasonably support by cutting back, thus reducing the number of buds on each twig.

Only by careful study and application of the above principles can we expect to build up the maximum fruiting wood capacity of our trees, and it is a programme that must be followed year after year in order to attain maximum results. I am sure such a programme is necessary for maximum yields of regular crops of high quality fruit.

lighter pruning will necessitate more thinning expense, but any programme that will set more Apples on the tree will justify considerable additional thinning costs.

Quality of Fruit.

The assumption that heavy pruning is necessary for quality production does not usually hold true in actual practice. In a heavy dormant pruning we usually lose sight of the heavy return one year succulent growth before the colouring season begins. This new succulent growth with heavy foliage interferes more with colouring than additional small fruiting twigs and branches left in the tree. A heavy cropped tree usually colours its fruit to much better advantage than a lighter crop with more new succulent growth. Of course, the first year in breaking into this programme, we will be carrying more of the one year growth than the two and three year growth, and thus will not be getting the maximum results in fruit-

Berry-growing at Kalorama, near Mt. Dandenong, Vic.

Degree of Pruning.

Generally speaking, the pruning done is much too severe for maximum yields and quality fruit. With a programme of filling in with more new wood, the pruning will naturally be lighter. Many of our best growers are adopting a policy of lighter pruning with increasing results. The ing and colouring. However, this growth properly thinned out will not interfere with colouring as will an entirely new crop of one year succulent growth. **We should keep in mind that a tree full of fruiting wood will produce heavier crops of higher quality fruit than a tree with less fruiting wood, but more new succulent growth.**

To illustrate the foregoing, pictures were shown, revealing three different types of pruning practised. (1) Heavy cutting back; (2) considerable thinning of the small fruiting wood, following a heavy programme of big wood removal and wide tree spacing; (3) very light thinning of the smaller fruiting wood following a more moderate programme of big wood removal and of tree spacing.

	Heavy cutting back.	Heavy thinning.	Moderate thinning.
Number of Fruit buds . .	1,495	2,980	4,389
Apples . . .	448	668	1,660

Interstate Citrus Conference.

Important Gathering at Melbourne.

Local and Interstate Marketing — Research — Wonderful Development of Fresh Fruit Drink Trade — Heavy Crops in N.S.W.

THE ANNUAL INTERSTATE CONFERENCE of Citrus Growers, held in Melbourne May 8th, 9th, and 10th, was a successful function. Matters of interest affecting the industry generally and the Association in particular were discussed. Three aspects seemed to be outstanding:—(1) The value of organisation in lifting and stabilising prices: in this connection improvements in marketing were suggested; (2) the importance of research re bud selection, stocks, irrigation, drainage, manuring, pest control, etc.; and (3) the outstanding service rendered by the Railways Commissioners in ably demonstrating the value of the fresh fruit drink trade.

Delegates attended as follows:—

V.C.C.A. Executive.—A. N. Schwennesen, Murrabit (chairman), Captain Halhed, Merbein (director), B. S. B. Cook (manager and secretary), W. R. Branson (market representative).

N.S.W. Delegate.—P. S. MacDermott.

Victorian Delegates.—H. R. Paton (Merbein and Red Cliffs), N. Wormwell (Mildura), L. R. Strother (Curlwaa), J. A. Welsh (Nyah), J. P. Greenwood (Tresco), P. Cobbett (Bamawm), J. Ford Paterson (Shepparton), C. V. Rees (Long Lake), J. S. Cotton (Cobram), Rupert Watson (Perricoota), A. J. Wood (Tongala), P. Rossiter (Ngawe), F. W. Wilcox (Wangaratta).

South Australian Delegates.—H. Metters (Renmark), Chairman Murray Citrus Co-op. Association, J. A. Parkes, Secretary Murray Citrus Growers' Association.

West Australian Delegates.—A. C. R. Loaring, Secretary W.A. Citrus Association, H. Harper, manager, Producers' Markets Co-op. Association.

Officials.—J. M. Ward, Superintendent of Horticulture (Victoria), S. A. Cock, Victorian Government Citriculturist.

Visitors.—R. S. Stranahan (Tresco, Vic.), G. R. F. MacMullen (Bamawm, Vic.); J. R. Wise (Bamawm, Vic.); J. H. Riley (Murrabit, Vic.); T. C. Roddis (Tongala, Vic.); Capt. W. G. Harrison (Shepparton, Vic.); A. C. Fricker (Pyap, S.A.).

Official Opening.

The Hon. T. Paterson, Minister for Markets, gave an appreciated address and spoke in optimistic terms. There were in Australia, he said, 47,000 acres of Oranges and 6,000 acres of Lemons. The 1927-1928 crop was 3,130,000 bushels of Oranges and 538,000 bushels of Oranges: average yield, 66 bushels of Oranges per acre; 90 bushels of Lemons per acre. Instead of experimenting with 10,000 cases of Oranges for export, as requested, the Council for Scientific and Industrial Research said that the conditions should be controlled from the growing period right on. Part of Mr. Ranger's expenses to California had been paid in return for a report regarding Californian methods. Mr. Ranger advocated treating citrus fruit with a borax solution, and also with a coating of paraffin—the Brogdex and Brogdite systems. As growers had expressed a decided doubt as to the efficacy of the system for controlling blue mould, experiments would be conducted. Regarding irrigated areas, returned soldiers had been settled therein, growing canning fruits and vines for wine and drying, but no provision had been made for marketing the huge surplus above Australian needs. A committee would report before launching on future new schemes for settlers or planting. Research work in bud selection and root stocks was advisable.

In moving a vote of thanks, Mr. J. A. Parkes (S.A.), favoured an investigation before anything was done with the Brogdex process. Bud selection was receiving serious attention.

Crop Estimates.

District delegates submitted the following crop estimates:—Less: Nyah, Merbein, Curlwaa, and Mildura, each 50 per cent.; Perricoota, 20 per cent. More: Wangaratta, 50 per cent.; Shepparton, 25 per cent.; Tresco and Tongala, each 20 per cent.; Murrabit, 10 per cent.; Cobram and Longlake, same as last year; Red Cliffs, 5,000 cases, against 3,000 cases last year; Bamawm, slightly less than last year. Last year 360,000 cases were produced.

The Superintendent of Horticulture (Mr. Ward) and the State Citriculturist (Mr. Cock) said they thought the crops would be bigger than the estimates.

Mr. P. S. McDermott (N.S.W.) reported that the navel crop in N.S.W. would be one-third more than last year, Valencias and commons 100 per cent. more, Mandarins the same, and Lemons slightly less. The South Australian crop was reported to be 40 per cent. less, and West Australia appreciably less than last year.

Market Representative's Report.

Mr. W. E. Branson, market representative, stated that the 1927-28 season was a record, not only for values, but for superior quality, well-packed fruit. The progress in standardisation was highly commendable. The day of the individual pack and of the small grower was passing. The time was not far distant when the whole of the citrus pack of Victoria and the sister States would be marketed through the packing shed system. Mr. Branson attributed the remunerative prices obtained last season to: (1) The early maturity of the crops generally; (2) the purchase of 40,000 cases by the Victorian railways, for fruit drink trade, which, if marketed, would have reduced prices by 2/- a case. The interest taken by the Railways Department had lifted the industry out of a rut; (3) the destruction of the Apple crop by thrips and the short crop of Queensland Bananas; (4) the small size fruit.

Fully 80 per cent. of the crop ranged in sizes from 96 counts upwards. In other seasons the percentage would be more like 40 per cent. Retailers state that their sales fall off fully 50 per cent. when they cannot purchase navel Oranges to sell for six and eight a shilling, although better value may be offered, as far as weight of pulp is concerned in the larger fruit, which has to be sold at four a shilling. An explanation of this may be found in the fact that the whole of an Orange or none at all is exacted by most children nowadays, and in many cases by adults, too.

Regular Supplies. High values early in the season attracted more fruit than was required. Districts fulfilled the request to steady consignments, thus maintaining high values. Later, big stocks accumulated owing to heavy forwardings from districts that suffered from severe frosts. By holding off the market for a week, the market was cleared, and prices steadied. Values for navels increased for the rest of the season.

With Valencias, it was different. Growers held back much fruit, anticipating bigger values during January,

February, and March. Then came the coldest January for many years, which was disastrous to the Orange drink trade. Hundreds of cases in store were lost. There was a big disparity in prices between the medium and choice fruit. The Citricultural Department was to be commended for educating growers as to the importance of cultivating the best varieties. It was a pity that Thompson's Improved and Navelencia were ever planted. Growers having these varieties should work them over as soon as possible.

Mr. Branson then submitted a statement, showing variation of quality of Washington Navels grown in different soils and climates, such as the thickness of the rind, rag, juice per Orange and sugar content. The quantities of **Oranges** handled by the V.C.C.A. to December, 1927, were as follows:—From Victoria, 111,428; South Australia, 113,931; total, 225,359. **Lemons:** Apart from factory lots, 14,958 cases were marketed during the season. Appreciation was expressed of the services rendered by the V.C.C.A. agents.

Future Prospects.—Lighter crop of navels was anticipated in 1928, with larger fruit, which would involve difficulty in selling. The phenomenal Apple and Pear crop would affect Orange sales. However, with a lighter crop to handle and a relief from the general depression during the coming spring, all should go well.

Levies.

In reply to a question, it was stated that the V.C.C.A. was supposed to collect levies on the outside fruit handled by the V.C.C.A. agents. The amount received, however, was negligible. The Secretary stated that growers were due to pay levies on all fruit marketed outside V.C.C.A. channels. Many considered that they were not liable, as they had to seek their country customers, thus relieving city fruit markets, whereas the Association submitted that but for the controlled supplies in Melbourne, steady prices could not be maintained. A levy was paid on all fruit purchased by the Railway Department.

Mr. McDermott said that in the N.S.W. Citrus Association packing sheds a levy of 2d. a case was struck on all fruit handled, irrespective of its destination.

Harmful Market Quotations.

Captain Harrison (Shepparton) stated that much harm had been done to the Goulburn Valley through the quoting of prices of fruit from the various districts. Fruit should be sold on its merits, from whatever district it came. Messrs. Cobbett and Wood supported. Mr. Wood said that buyers had a definite mental prejudice against Goulburn Valley fruit, because of the unfortunate press reports.

It was decided to in future quote A, B, and C quality under special, standard and plain—no district to be specified.

Plant Quarantine Station.

Conference affirmed the necessity for the establishment of plant quarantine stations. Mr. E. McKinnon, Federal Director of Plant Quarantine, said he was looking for a suitable site—one near Melbourne, to serve the southern and western States, and one near Sydney, to serve Queensland and N.S.W. New varieties of citrus, Apples, Pears, etc., could then be safely introduced. Buds would be taken from the imported trees, and the original trees destroyed. In reply to delegates, Mr. McKinnon said there would be no danger of introducing disease: plants would be kept in insect-proof shelters. Plans had been drawn for a new fumigation depot at Melbourne.

Mr. Cock (Government Citriculturist) said that through the Plant Quarantine Station new varieties of Grapefruit from the South of Asia, also from Florida, could be safely imported. The varieties were urgently needed here.

Packing Instructors.

A motion was agreed to, expressing appreciation of the excellent work of the packing instructors of the Department of Agriculture, but urging the necessity of appointing at least one more instructor so that the department could cope with this important work.

Value of Organisation.

Mr. F. H. Metters (S.A.) said that the organisation of Citrus Associations in South Australia and Victoria had greatly benefited the industry. In 1921, values in Adelaide and Melbourne were at a low ebb: but by the organisation of the growers, market prices had been steadily and substantially increased. He had paid in seven years about £1,500 in levies (4d. per case), but this was a mere bagatelle: that sum and more had been saved by the difference between the 7½ per cent. now paid and the 10 per cent. previously paid. He had received in the season benefits exceeding £3,000—more than double the levies paid in seven years.

Mr. J. A. Parkes said that the price of Oranges had risen from 4/11 and 6/8 per case to an average well over 10/-, as a result of organisation and co-ordination between the States. He urged that sales should not be made for speculative purposes, as such fruit finally came into competition with the growers' fruit marketed in the ordinary way, and tended to reduce values.

Address by Minister for Agriculture.

The Chairman (Mr. Schwennesen), in introducing the Minister for Agriculture, Hon. W. Slater, M.L.A., asked that higher salaries be paid to citrus supervisors in order to attract the right class of man.

The Minister expressed satisfaction at the extension of the organisation, which had become interstate in character, and now had nineteen branches in Victoria, comprising 70 per cent. of the citrus growers. Organisation was a vital necessity. 130,000 citrus trees had been fumigated during the past three years. The Minister deplored the rejection of the amending Farm Produce Agents Bill by the Legislative Council. The bill was designed to protect producers from some of the unscrupulous agents, and the Government would again attempt to induce the Council to pass the bill. The bill was drafted in general terms to cover all producers who were affected. Most of the men engaged in selling fruit were honest: not all. The bill was designed to protect growers from the unscrupulous. His department would again co-operate with the Railway Department in an advertising campaign. He complimented the splendid public service of the Commissioners in successfully carrying out this work, but for which prices would have been much lower. Cabinet had approved the Citrus Levy Bill, which he believed was essential because voluntary principles were totally inadequate. Men refused to contribute to an organisation, yet they accepted the benefits it obtained. The levy principle had worked out well in the industrial sphere, and he saw no reason why it should not be successful in primary activities. Before the bill became effective it must obtain the consent of the growers by ballot. Efforts were being made to improve the wholesale market in Melbourne. While supervisors' salaries were low, a Government faced with a deficit of £1,500,000 was limited in its financial resources.

In moving a vote of thanks, Mr. Halhed (Mildura) stated that, as the result of the better prices obtained by organisation, there was a tendency on the part of some growers to slacken interest. There was nothing socialistic in the proposals for a compulsory levy on all citrus fruit marketed. All growers had benefited by the general increase in price of 4/- a case through organisation.

Mr. McDermott (N.S.W.) stated that New South Wales growers were continually fighting their railways for a fair deal. This year, owing to the glut of Apples and the heavy citrus crop, a levy of one penny a case on all fruit marketed in Sydney was proposed for advertising purposes. Fruitgrowers in other States were asked to agree to the levy. New South Wales fruitgrowers would pay on fruit marketed in other States.

Departmental Enterprise.

Mr. S. A. Cock, Victorian Government Citriculturist, detailed the work of his department in relation to citrus culture. A census was being taken of the trees planted, so that more accurate advice could be tendered later regarding varieties which might profitably be planted. It was because of the neglected orchards that the average production per acre throughout the State seemed low. Well-cared-for citrus groves on suitable soil yielded £500 per acre. Studies would be conducted by the Department of Agriculture in relation to soils, localities, irrigation, manuring, subsoiling, drainage, seepage, alkali: soil analyses were being conducted. It was certain that citrus culture was a specialised art; the trees should be planted in defined areas, and not in the midst of a Lucerne paddock. Tests were being scientifically conducted to discover improved conditions on irrigated lands at Shepparton, Murrabit, and the Murray Valley, and on non-irrigated soils at Wangaratta. Gypsum was useful in many areas for soil amendment: wood ashes, however, were absolutely beneficial wherever used, and could be universally recommended, because of their lime, potash and phosphoric acid contents. Nitrogen was an essential element in citrus culture. In experiments, trees were being completely enclosed in hessian to discover skin disfigurements, whether due to wind, limb rubs, thrips, or other causes. Certainly shelter belts could be earnestly advocated. The orchards at Doncaster were models in this respect. Lists of trees suitable for shelter belts were being compiled.

Work was being done regarding bud selection, the use of ethylene gas for colouring mature fruits, storage and transit rots, frost protection by means of oil and other fuel burners. Regarding bud selection, Mr. Cock continued, we must go on evolving our own improved types: by experimenting with early and late varieties of Oranges, the fruiting season could be extended throughout the entire year. Growers were being asked to note type variations over a three-year period. Stud trees at Burnley were yielding valuable results.

In proposing a vote of thanks to Mr. Cock, Mr. Cobbett said growers owed the Department a debt of gratitude for their far-seeing enterprise and their work in fumigation.

Supporting the resolution, Mr. A. C. R. Loaring said Western Australian growers appreciated the services of their Horticultural Superintendent, Mr. Wickens; but he would urge the appointment of a citriculturist, as in Victoria.

Mr. Parkes (S.A.) informed the Conference that Mr. Loaring's property in W.A. was one of the best he had seen in Australia.

Mr. Loaring said he had sprayed only once in 22 years. He believed in the parasitic theory: the parasites had kept the scale in check in his orchard.

In reply to a question regarding fumigation, Mr. Cock said that fumigation was not 100 per cent. effective, because of climatic conditions and the period of the moult of the scale. He was waiting for some additional material from California and from Germany: fumigation, however, had placed the growers in charge of the scale instead of the scale being in charge of the growers. The Department was experimenting with para-

Delegates and visitors attending the Interstate Conference of Citrus Growers at Melbourne during May.
Back row (from left to right): A. J. Wood, ——, J. Vise, C. V. Rees, F. Wilcox, J. Welsh, J. P. Greenwood, C. H. Tutton, T. C. Roddis, J. S. Cotton,
Centre row: H. Wormwell, H. R. Paton, L. R. Strother (N.S.W.), P. Cobbett, G. MacMullen, Ford Paterson, Capt. Harrison, H. Harper (W.A.), P. Rossiter, S. Cock (Government Citriculturist).
Front row: J. A. Parkes (S.A.), F. H. Metters (S.A.), A. C. R. Loaring (W.A.), P. S. McDermott (N.S.W.), A. N. Schwennesen (Chairman), Hon. T. Paterson, M.H.R. (Minister for Markets), Capt. Halhed, W. E. Branson (V.C.C.A. Market Representative), J. M. Ward (Superintendent of Horticulture), R. Watson (N.S.W.), B. S. B. Cook (Secretary V.C.C.A.).

sites: they were "tricky" customers, however, for after killing the scale, the parasites themselves died out: a continuous supply was necessary.

A resolution was carried, congratulating the Department for its decision to enquire into tree records and bud selection: and urging growers to co-operate in the work.

Australia and California Compared.

Mr. C. V. Rees (Lake Boga) read a paper prepared by his brother, Mr. H. Clifton Rees, B.C.E., who had recently returned from California: the paper stated that 40 per cent. of our navel trees were of "off-type" varieties: fundamentals for success were good trees, good soil, moisture control, and the maintenance of soil fertility. Export would soon be a necessity. Dr. Webber and Mr. Shamel, of California, had helped to establish the standard type fruit, produced through twelve months of the year.

In the matter of soil moisture control, it was a curious fact that we neglected the advantages of irrigation for this purpose and let soil moisture control us. It is only by trained supervision that drainage trouble and death of citrus trees can be overcome. By the California system of miners inches, the water is measured on to each block, and the operator has become skilful in the use of the water. In citriculture the subterranean conditions are more important than those above ground. The economic loss suffered by the fall of Oranges in the spring was largely the result of faulty irrigation.

It would be of benefit to keep in touch with the progress reports issued by the Riverside, U.S.A., Research Station. It had been definitely shown that nitrogen was the only element, and organic matter the only other material which had given improvements in yield and tree health.

In the biological control of insect pests, we owed most to the Californian entomologists. Now that the Commonwealth has appointed a renowned entomologist, citrus growers could hope for the control of at least some of the present pests. It was to be hoped that the activities of the parasites in which Australia abounds would be increased by the establishment of insectaries.

Mr. Rees advised the adoption of bigger citrus areas in mass, concentrating on one, or at most, two, standard varieties. Quantity of product is required for economic packing results. A packing house manager could not successfully operate a modern packing shed receiving a large variety of fruit from a small area, and in the case of navels with 40 per cent. off type.

Pure Fruit Drinks.

At the instance of the Secretary, Mr. B. S. B. Cook, who said that 50 per cent. of the Californian citrus fruits were consumed as fresh fruit drinks, it was decided that the Federal and State Governments be urged to amend the pure food standards relating to drinks and confections made or purporting to be made from citrus fruit, to prevent the public being deceived by misleading labels; and to request that a representative of the citrus industry be added to the State Committees on pure food standards.

Dr. Merrilees, of the Public Health Department, said there were difficulties in enforcing pure food regulations, because of the varying standards in the several States. There were loopholes for evading regulations. However, it was now certain in Victoria that "fruit juices," "squashes," and "fruit crush" must be pure fruit, and contain no foreign pulp whatever. Imitations would have to be labelled as such.

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England, the Continent and New Zealand.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

In reply to Mr. Parkes, Dr. Merrilees explained the activities of the several State Pure Food Standards Committees. These could be approached direct, or through the Federal Secretary.

Country Order Trade.

Mr. Greenwood (Tresco) moved a resolution opposing any action which would detrimentally affect direct sales by districts to country clients, where it could be shown the sales were not made for purposes of speculation.

Mr. Parkes (S.A.) urged closer co-ordination between districts regarding the fixing of prices.

Mr. Cobbett considered that the announcing of prices for three-monthly periods was too long.

Mr. McDermott (N.S.W.) said packing houses in N.S.W. exchanged price lists with a view to uniformity, and avoiding price-cutting.

Messrs. Paton, Wilcox, and Halhed contributed to the discussion. The motion was carried.

Australia's Markets.

The activities of the Development and Migration Commission were the subject of an address by the Chairman (Mr. H. W. Gepp). The Commission had to maintain a balanced view of Australia, and an accurate study was being made for various industries which were not satisfactory. The recommendations made by the Commission for the improvement of the dried fruits industry would be discussed at a conference at Mildura on 3rd July. The future of the irrigation area in the Murray River basin was now being investigated as a result of the Commission's suggestion. Indeed, this problem might apply to all irrigation areas in Australia.

Marketing in Melbourne.

An application was received from a firm desirous of being appointed a member of the V.C.C.A. accredited agents. After discussion, it was decided not to appoint any additional agents.

In urging that accredited agents be requested to conduct their own stands at the Victoria Market, Mr. Rossiter quoted experiences which showed the necessity for accredited agents having Victoria Market as an outlet for the heavy supplies coming forward.

Mr. Branson said this would necessitate doubling the staffs of the agents. Agents had outlets for about 20 per cent. of the fruit at top prices to the high-grade shops; 40 per cent. went into medium class of trade at lower prices, and 20 per cent. through dealers.

Mr. Wood said the sales made to dealers were detrimental to Association growers. The disposal of fruit to dealers was one of the arguments advanced against the V.C.C.A. system. The profits of 1/- to 1/6 a case now made by dealers should go direct to the growers.

Name Abbreviations.

A list of abbreviations to indicate varieties was submitted by the Department of Agriculture, but delegates stated their present designations were better, and no action was taken.

Citrus Storage Experiments.

It was reported that the Council for Scientific and Industrial Research, together with the Department of Agriculture and Railways Department, were co-operating in conducting experiments for the storage of citrus fruits. It was regarded as a forerunner of export experiments and preservation processes. A resolution expressing satisfaction was carried.

Mr. McDermott said that an insurance fund was necessary to stabilise export. The N.S.W. Department of Agriculture was taking this matter up.

Maturity Standards.

Mr. Wood said that a new regulation had been drafted in relation to maturity tests for Oranges. In reply to Mr. Parkes, he stated that it could be arranged for maturity tests to be taken before the fruit was despatched from country districts: not less than five Oranges to be taken at random from cases bearing the same marks, for testing purposes.

Mr. Cock pointed out that treating fruit with ethylene gas to give a good colour was useless if the fruit was sour. The Conference approved of the necessity for maturity standards.

Markets in the East.

Mr. H. Louey Pang, fruit merchant, Melbourne, who recently visited China, stated there were good markets there, but the difficulty was in securing refrigerated space on the boats. Fruit for Shanghai had to be trans-shipped from Hong Kong. A large buyer, who obtained 40,000 cases of American Oranges last season, said he would buy them in Australia if transport could be arranged. He suggested that the Government might take up the matter of experimental shipments.

Mr. H. Harper (W.A.) said that experimental shipments of trays of Oranges, unsweated and unwrapped, had carried successfully, both as deck cargo and under refrigeration, from Fremantle to London. Navels realised 4/- per dozen gross. Larger shipments were proposed this season.

Mr. Parkes said these small experimental shipments frequently carried successfully, but they did not "cut much ice" with relation to bulk shipments.

Mr. A. C. R. Loaring (W.A.) said he had shipped Oranges to Singapore, and had them returned in perfect condition without refrigeration.

Conference With Agents.

Messrs. Herbert Wilson, Jacobs (Geo. Lister), McNamara (Producers' Distributing Society), attended on behalf of V.C.C.A. accredited agents. Replying to Mr. Wood, it was stated that fruit was sold on its merits, whether coming from the Goulburn Valley or any other districts. Mr. McDermott stated that inferior fruit on the market was a problem all over the world. Owing to economic pressure, inferior fruit packs had to go out of existence.

Sub-Tropical Research.

It was decided to urge the establishment of a sub-tropical irrigation and non-irrigation research stations in citrus-growing areas, and to request Drs. Tillyard and Dickson, of the Council for Scientific and Industrial Research, to investigate pests and diseases of citrus trees.

Mr. Wilcox stated that while it was doubtless important to obtain information from abroad, nevertheless, a great deal of work was waiting to be done locally regarding pest control. The money spent on world tours would be better used for testing sprays and fumigation locally.

District Improvements.

A resolution, congratulating the Murrabit district on its progressive enterprise in presenting a shield for high quality fruit and the best-kept citrus grove, was carried.

Prohibition of Imports.

There was much discussion relative to the proposal to request total prohibition of citrus from America, in view of the fact that America would not take our citrus. It was pointed out, however, that the modest quantity received in the U.S.A. was received during the time of shortage of Australian supplies, when citrus fruit was needed here for the fresh fruit drink trade, and that the quarantine regulations were sufficiently strict to prevent diseases entering Australia. It was decided to request the Federal Quarantine authorities to rigidly enforce regulations to prevent the introduction of the white fly and other pests.

Railway Department Purchases.

There was hearty concurrence in the proposal to assist the Railway Department in every way in regard to the purchase of citrus fruits for the fresh fruit drink trade. Delegates reported that some growers had been disinclined to send their fruit to the Railway Department, as originaliy

Mr. Clapp's Inspiring Address.

Mr. H. W. Clapp, Chairman of the Railway Commissioners, in being introduced to the Conference, was cordially welcomed. The fruit industry, stated Mr. Clapp, had a gross value of £18,000,000; Victoria had 8,000 growers with a gross value of £6,000,000.

In 1922-23, the Victorian railways carried 2,800,000 cases of fruit. Last year the quantity was 4,000,000 cases. In every way the railways were co-operating with the Water Commission. The publicity of the Railways Department had largely increased the consumption, of fruit—fresh, canned and dried. They had used 40,000 cases of Oranges in the fresh fruit drink trade. This year they hoped the quantity would be 60,000 cases. This pointed the way for others to do the same. Hotel-keepers should have more fresh fruit on their tables.

Growers had not yet scratched the home market: there would be no surplus to export for many years. Tests should be made to assist in reducing losses on Oranges in cold store. Growers could increase their output per tree and per acre by proper bud selection. There were still too many "scrub" trees. In canned fruit, the 1922 output was 6,000,000 2lb. tins. Last year the total was 26,000,000, and this year it would be 31,000,000. The Australian consumption was now 20,000 tins a year. The idea was to inculcate a "fruit conscience" among the people—that fruit was necessary in a well-balanced ration. Fruit had much more to do with long life and good health than taking salts in tea in the morning and pills at night. "The average price we paid for our Oranges," continued Mr. Clapp, "was 13/6 a case, which was a very fair price. If you bump up the price against us, your insurance company you will get the bump back in the eye, because we will not be able to take the fruit. **The Department would only purchase from V.C.C.A. growers.**

By helping the fruit industry, the railways were assisting to increase the freightage over the rails, thus the interests were mutual. (Other deails and statistics quoted by Mr. Clapp were included in May "Fruit World," pp. 177-178.)

In moving a vote of thanks, Mr. J. A. Parkes, S.A., said that Mr. Clapp's services to Australia were of outstanding value.

Growers would assist the railways in reducing storage losses by picking Oranges under export conditions, that is, the use of gloves for picking, and sweating from 10 to 14 days before packing.

There was great enthusiasm in carrying the vote of thanks, delegates singing "For He's a Jolly Good Fellow," with great heartiness, and giving three cheers.

Votes of thanks to the Chairman and the President concluded the proceedings.

A moving picture film was shown revealing conditions in a Californian packing house, and the Brogdex and Brogdite systems in particular.

Visit to O.T. Factory.

Delegates enjoyed a visit to the O.T. factory, at Prahran. Large quantities of Lemons and Oranges are used in the manufacture of fresh fruit drinks. The hygienic methods employed were appreciated.

Visit to Doncaster.

By courtesy of Mr. Murray, of the Vacuum Oil Company, delegates enjoyed a motor trip to Doncaster, and the surrounding districts where Lemons are freely grown.

Citrus News and Notes

CONTROL OF CITRUS APHIS.

The following is an extract from a paper on Citrus Aphis, read by Mr. Clifford Dodds, before the Citrus Institute, San Bernardino, U.S.A.:—

Nicotine sulphate, sold under the name of "Black Leaf 40," is the old standby for aphis control in the citrus country of California. It mixes well with other sprays, and its use in combination with various sprays increases its efficiency or makes it possible to kill more than one kind of pest.

In using a nicotine spray, it is well to add some kind of spreader. Three types of spreader in general use are —casein, soap, or albumen.

Lime sulphur, nicotine and a spreader make the most effective spray for citrus aphis. Lime sulphur at 1½ to 2 gallons per 100 gallons of water and nicotine at ¾ pint per 100 gallons.

A number of manufacturers of oil sprays have incorporated nicotine in various forms, and some of these have given favourable results, killing red spider and scale at the same time, with very little additional cost.

CITRUS EXPORTS TO N.Z.

Extension Sought.

There was a full attendance of all the associated citrus packing houses at the last meeting of the N.S.W. Central Citrus Association at Sydney. The trade with New Zealand was reported to require further stimulation, as only 27 per cent. of the total export of last year passed through the Association's hands.

The manager of the Association, Mr. H. G. Such, was instructed to proceed to New Zealand and secure business for the coming season.

It is expected that 300,000 cases of citrus will be handled by the central packing houses in N.S.W. this season, 50 per cent. of which will come from the Murrumbidgee irrigation area.

AMERICAN GRAPE FRUIT.

The demand for Grapefruit is increasing in England, and America exported 421,000 boxes to the United Kingdom during 1927. In 1926, the figures were 158,000 boxes. The bulk of the fruit was sent from Florida.

PACKING SHED FOR BAMAWM.

In order to facilitate the packing, grading, and despatch of Oranges from the Bamawm, Northern Victoria, citrus area, growers are subscribing to the erection of a packing shed near the Lockington railway station.

CITRUS LEVY BILL.

"To be Introduced as Soon as Possible."

The Victorian Government will introduce the Compulsory Citrus Levy Bill as soon as possible, states the Minister for Agriculture (Mr. Slater). If passed, all growers will be given a vote as to whether or not the Act shall become operative.

Citrus Studies in U.S.A.—The Commonwealth Council for Scientific and Industrial Research has forwarded a syllabus of the Summer Courses in Subtropical Horticulture, to be conducted at the Citrus Experiment Station, at Riverside, California. The lectures, laboratory work and field studies are to cover a period of six weeks from July 2 to August 11, 1928.

The citrus crip in Queensland this season is above the average for quality and quantity. Speaking generally, the fruit industry in Queensland shows a promising future.

CITRUS TREES.

Is There a Shortage?

Fruitgrowers have been complaining of the shortage of young citrus trees for planting. There has been a big demand on the nurseries this year. Large orders have been placed by growers in the Argentine and New Zealand. In many cases, nurserymen have not been able to supply local orders.

This is a temporary shortage only, and nurseries will cater for an enlarged trade next season.

THE EXPORT OF ORANGES.

The Commonwealth Council for Scientific and Industrial Research has issued a pamphlet on the export of Oranges. This emphasises the necessity for an external market if the industry is to progress. The methods used in California and South Africa are deemed to meet Australian requirements, and are set out in detail.

The utmost care in the handling of the fruit is recommended; the fruit should be cut, and the pickers should wear canvas gloves. The whole process followed in a Californian packing house, from the time the field boxes are placed on the endless belt, which conveys them to the washer, is described. After washing in water containing soap powder, the fruit passes through a series of brushes. It next passes through a solution of borax and boric acid at a temperature of 95 to 100 degrees Fahrenheit. A small spray of fresh water washes off any excess of borax. The third operation consists of drying the fruit by passing it over a drier, the operation taking 15 minutes. After being hand graded for quality it is conveyed to the sizing machines, and passes through electric marking machines. The packing is done by girls, who place the full cases on a travelling belt, where it passes to an automatic nailer. The "Brogdex" process, in which a thin coat of dissolved paraffin is put on the fruit is also described. This process is also used in South Africa, where, at the port each consignment is inspected by a special staff of inspectors. Other information of interest to the Citrus grower is included.

DISEASE OF SOLEMNITY.

Woe to the philosophers who cannot laugh away their learned wrinkles. I look on solemnity as a disease. It appears to me that morality, study and gaiety are three sisters who should never be separated.—Voltaire.

Canadian Case for Apples and Oranges

Size 18 x 11½ x 10½.

Valuable for Local, Interstate and Export Trade.

THE "Canadian standard" bushel case is earnestly advocated by the Victorian Department of Agriculture for both Apples and Oranges.

The size is 18 x 11½ x 10½.

This case has been largely used during the export season just closed. Growers state it is better than the dump case for picking into.

A demonstration was given by Mr. Basil Krone, fruit packing expert of the Victorian Department of Agriculture, at the recent Citrus Growers' Conference.

It is stated to be the case adopted exclusively in the North-West Pacific Coast States of U.S.A., also in New Zealand.

It is understood that in N.S.W. the case 20 x 11½ x 10 is favoured. This is undoubtedly a serviceable case. Against its general use is urged the argument that it holds considerably more than a bushel of fruit. Why should growers give their fruit away?

The 18 x 11½ x 10½ contains 2,178.5 cubic inches, and needs a bulge to give the required 50 cubic inches to make it up to the full cubic capacity of the bushel requirements.

Recently some of the "Canadian" type cases (18 x 11½ x 10½), containing Apples, were sent to Sydney, but because this sized case is not officially listed, it was impossible for the sale to proceed, and the fruit had to go on to Queensland.

Requests are being made for the "Canadian standard" cases to be listed under the N.S.W. regulations.

Further tests are being made by growers in all the States regarding the value of the 18 x 11½ x 10½ case. The Horticultural Division of the Victorian Department of Agriculture is now preparing a wall chart, showing this case and its merits, compared with other cases in use.

ORCHARD MACHINERY.

Cultivating Implements and Dehydrators.

Considerable progress has been made at the implement manufacturing works of Mr. D. Harvey at Box Hill (Vic.). Mr. Harvey is an enterprising manufacturer, possessing considerable inventive and engineering skill. His orchard and vineyard implement manufacturing works now occupy a considerable area of land. Mr. Harvey achieved success in the designing of his shifting handle ploughs and cultivators, enabling cultivation to be done right up to the butts of the trees with the operator clear of the branches. This principle has been followed throughout, and is now included in the tractor drawn implements in which Mr. Harvey has specialised. The works are complete and up-to-date; much of the machinery having been designed by Mr. Harvey for the lines in which he specialises.

A new enterprise has been opened up in the manufacture of dehydrators. Three of these are now operating in N.S.W., and an additional eight plants are on order, mainly for Prune drying. These dehydrators are equally suitable for all manner of fruits and vegetables. Following the success of the dehydrators installed, additional enquiries are to hand, mainly from the Goulburn Valley, for the drying of Apricots, Peaches, and Pears. In the drying of Prunes, it has been found of advantage to growers to have their own dehydrators on their orchards, as it is impossible to cart the ripe Prunes any distance for processing. Wood fuel is used for heating, while the only power required can be got by using the spray pump engine.

After the Prunes are dipped, they are taken straight to the dehydrator.

The drying process takes from 10 to 15 hours, according to the size and fleshy nature of the Prunes treated. A very fine example of dried fruit is produced with the dehydrator manufactured by Mr. Harvey. Hot air is supplied at about 160 degrees. As the moisture is removed, fresh air comes in gradually from regulated valves: the temperature regulated—thermometors being in position to determine an exact formula. The dehydrators are made in sections for easy transport and erection on the growers' property. There are two convenient sizes, a small and a large, to suit the convenience of growers.

STEADILY in the several States the benefit of organisation among fruitgrowers is becoming realised. It is abundantly apparent that differing methods must be applied for the particular fruits produced. Organisation, too, is affected by the many widely differing causes, even including the contour of the country.

The various sections of the industry are grouping themselves in districts, then follow State and Federal organisations. No general plan is suited for all. Each section is working out its own problem. Methods that are eminently suited for, say, dried fruits, which can be marketed over a long period, differ materially from methods which are desirable for other branches of the fruit industry.

Broadly speaking, however, the major considerations are:—

(1) The grouping of the growers according to their particular fruits or the contiguous districts, and the linking up of such into State-wide or Federal organisations, as warranted by circumstances. (2) Standardisation of varieties and in packing. (3) Harmony is desirable in relation to trade, as growers need wholesale and retail channels of distribution. (4) The immense benefits of advertising have been clearly demonstrated, but the time is surely coming when this phase will receive much more attention from growers. Advertising is not an expense; it is an investment that yields substantial profits.

Australian growers, in company with all primary producers, are affected by the economic conditions of the country, and the policy of Governments. We are only a handful of people on a large continent. As a people, we have to share the problems of pioneers. Primary producers, however, strongly claim that they are at present bearing more than their share of the burden.

Various methods of relief are being considered. Some favour one method, some another. We are still in the formative period, and need all the light possible: also, we need a long vision and to anticipate the effect of our doings now and over the next ten and twenty years onwards.

These matters can be debated vigorously, but without heat or bitterness. The columns of the "Fruit World" are open at all times for expression of the views of men who have something worth while to say.

In this sunny and fertile continent of Australia, there is developing a sturdy race of people with high ideals of citizenship and self-government, linked up with that splendid group comprising the British Empire, having the will to conquer and the power to make good in this South Pacific outpost of the Empire.

SCIENTIFIC RESEARCH.

FRUITGROWERS have expressed by resolution their approval of the programme for scientific research being conducted by the Council for Scientific and Industrial Research and for the efforts of the State Departments of Agriculture in this connection.

There is much to be accomplished, and it would be impossible to lay too much stress on the importance of these enterprises.

* * *

In Victoria, all sections of the fruit industry are urging the State Government to extend the terms of service of the Government Biologist, Mr. C. C. Brittlebank, whose work in plant pathology is so keenly appreciated here, and has won approval from all parts of the world. It would be a great pity if Mr. Brittlebank should be permitted to retire just when he is at his prime, with a lifetime's knowledge behind him, and holding, as he does, the complete confidence of all primary producers.

* * *

The work of Mr. A. D. Shamel, Plant Physiologist of the U.S.A. Department of Agriculture, whose work on bud selection is classic, might well be invited to Australia for six months to report on the layout and basis of a programme for bud selection. We have long years of work ahead, and no expense should be spared in seeing that our work is being built on a sure foundation.

Answer to Correspondent.

Humus in Soil.—A reader at Barham, N.S.W., asks how to introduce humus into the soil.

Answer.—Humus is introduced into the soil by ploughing in cover crops, or by using stable manure.

AUSTRALIAN FRUITGROWERS' CONFERENCE.

Should Function Again, Also Pomological Committee.

The Tasmanian Farmers', Stockowners', and Orchardists' Association, is consistent in its attitude towards the Australian Fruitgrowers' Conference and Pomological Committee. The importance of the work of these bodies to the fruitgrowing industry is fully appreciated, and regret is repeatedly expressed that they have ceased to function. In the President's Annual report for 1927, it is stated:—"It is some time since a session of the Australian Conference of Fruitgrowers and the Australian Pomological Committee was held. This is regretted, particularly in view of the fact that both these Federal bodies have in the past accomplished work of great importance to the fruitgrowing industry. At the instance of the Federal Government, an Australian Fruit Council came into being, but it appears to be inactive."

TO INCREASE APPLE SALES.

The Editor, "Fruit World."

Sir,—Many fruitgrowers, after their strenuous work in growing fruit, are having difficulty in disposing of their fruit and getting a fair return for their labours. At the same time, there are many housewives who are unable to obtain a supply at a reasonable price. Car owners obtain supplies while on short trips to the hills; non-car owners and those unable to visit the market are not so fortunate.

It would appear doubtful if the Department of Markets is alive to the desirability of "getting together," and possibly better helping the growers by the establishment of further means of disposing to best advantage the wonderful crop of Apples.

There are in Melbourne many large offices, workshops, and factories, each with a large number of officers and employees, e.g., the G.P.O., Elizabeth and Spencer streets, Melbourne and Metropolitan Board of Works, Spencer-street Railway Offices, Treasury, Titles Office, B.I.O., Sands and McDougalls, General Motors, Tramway depots, etc. If a committee (a very small one would only be necessary) were organised to receive orders and cash, distribute the fruit in cases or small lots, and accept orders

for the following week, a continuous demand and supply would be maintained, and the consumption of fruit thereby considerably increased. No doubt, with the hearty co-operation of those in authority and with close touch with the Government Cool Stores and a few reputable export fruit agents, there would be no difficulty in the conduct of an Apple Month—not an Apple Week.

The writer recently had four cases of Apples sent to his office, and in a very short time they were disposed of with facility amongst the staff. One room alone distributed two cases amongst a staff of twelve.

A central live committee could arrange small committees in each large establishment, and foster and regularly maintain the desired demand for more fruit. The Railways Department, has, I understand, helped fruitgrowers' associations by the sale of fruit in country districts from trucks in transit to the extent of between 7,000 and 8,000 cases, and is, I understand, arranging further truck sales.

There is a very big scope in Melbourne and suburbs for the consumption of more fruit if some properly organised committee would get busy and help the housewife, the office and factory worker, to purchase good Jonathan Apples at 3/-, 4/- and 4/- per case.

Might I suggest that the Departments of Marketing and Agriculture, who are directly concerned with the grower,

DO IT NOW.

North Cariton, 21st April, 1928.

EARLY CLOSING OF FRUIT SHOPS.

(To the Editor of "Fruit World.")

Sir,—At the monthly meeting of the Executive of the above Association, members entirely disagreed with the remarks as published in your journal of April 1, regarding the early closing of fruit shops for four nights of the week during the five winter months of the year. Our contention is that when one considers the long hours fruit shops are open during the other seven months of the year, we are entitled to a little relaxation during a period when practically there is no fruit required, especially now that the public are educated to it, and therefore purchase their requirements the same as other commodities during the trading hours of those concerned.

The article states there is only one way to prevent further inroads on growers' liberty, and that is the formation of an organisation to watch these and other matters. Now, surely, sir, you do not suggest that growers should organise to decide the trading hours of shops, and I can assure you the shopkeepers have no desire to prevent orchardists from working longer or shorter hours than they wish to, they themselves being the best judges as to the interests of their calling.

On reading your references to suburban picture shows, one would naturally think that if the fruit shops in their vicinity were open later, greater quantities of fruit would be consumed, but experience shows that at such places, sweets of various descriptions are more appreciated than the choicest of fruits, even in the warmer weather.—Yours,

EDW. W. THOMPSON,
Secretary.
Melbourne and Metropolitan
Retail Fruiterers' Association.

THE "FRUIT WORLD'S" REPLY.

It is of value to have the views of retail fruiterers expressed.

We firmly believe the fruit industry should always be viewed **whole**, and that the greatest good to all concerned is in mutual understanding and co-operation of grower, wholesaler, retailer, and the general public.

The points involved in our article and above reply by the retailers would be better discussed in conference between the parties concerned, when executive action could follow.

In reply to Mr. Thompson we would point out: (1) that there are only three winter months, not five as stated by him. He has included one month of both autumn and spring. In these months there are many extra thousands of people in Melbourne because of boat races and the Royal Agricultural Show, Henley, and other events.

(2) Because some shopkeepers desire to close, why make it **compulsory** for all? We know of (a) growers desiring the fruit to be sold; (b) shopkeepers and barrowmen wanting to sell it; (c) the public desiring to purchase, but because of the regulations these contacts are not possible.

(3) We notice the thousands of people who nightly cross Prince's Bridge from 7.30 to 11 p.m., where ordinarily here are well-stocked barrows doing a brisk business in selling fruit from May 1 till September 30. However, these stands have to close at 7 p.m. for four nights of the week. We believe the growers are losing a valuable outlet for their fruit. If we lose the sale for fruit at the time the customer wants to buy, the sale is lost for ever.

(4) As to "practically no fruit being required" from May to September, our Citrus growers will hardly agree, as that is their busy season for Navel Oranges and Lemons.

We believe it was an encroachment on the growers' liberty for the city fruit shops to be closed to conform to the same hours as the suburban shops. It was only by great exertion that an Act of Parliament was passed freeing Melbourne shops from these restrictions. In other words, because suburban shops desire to close, they desired that city shops should close also, apparently no account being taken of the large floating population of a city like Melbourne.

Even now it appears that because shopkeepers, say in Footscray, desire to close early during the winter months, no fruit can be sold after 7 p.m. from barrows alongside the Princes Bridge Railway Station.

If out of this discussion there comes closer co-operation between the growers and distributors, bringing in some needed modifications of the problems under discussion, some effective service will have been rendered to all concerned.

FRUIT EXPORT.

The Importance of Manchester.

Editor, "The Fruit World."

Sir,—Growers, exporters, and others who regularly study your advertisement pages have had ample proof of the strength of some of the principal British provincial markets.

Last year details were given of the average prices realised for Australian and Tasmanian Apples at certain provincial ports and London respectively.

Amongst the former, the results obtained at Manchester were remarkable, the average prices in every case being higher for certain popular varieties of Apples than at any other port—this, despite the fact that the bulk of such fruit sold there was railed from other ports.

This year there has been a shortage of fruit-carrying steamers at a time when there is a glut in most of the exporting States, and in the general scramble for space the big ports and big interests have, as usual, secured the lion's share.

Since November, when draft programmes were being prepared, Manchester importers and merchants have made urgent requests for direct tonnage, and many growers and shippers have intimated their desire to forward fruit to that port; with the exception of one shipment (arranged at the eleventh hour), no other provision has, however, been made for direct shipment to Britain's best market for imported fruit.

Doubtless, many thousands of cases of Australian Apples will be sold this year at Manchester, but after incurring unnecessary handling and transport charges and brokers' profits at some other port.

American and Canadian Apples are regularly shipped to Manchester and sold there during their export season, and Australian and Tasmanian growers and exporters should insist on tonnage being made available to enable them to exploit the great market of many millions of consumers in the North and Midlands, who can be served more economically via Manchester than any other port.

Attention is drawn to the advertisement in the current issue, which gives a comparison of the average prices realised at certain British ports for American Apples of the kinds named; the figures are based on the official weekly reports of the British Ministry of Agriculture.

Yours faithfully,
WM. JNO. WADE.
Representative of the Port of Manchester.

"DIEBACK" OF APPLE TREES.

Experiences in S. Australia.
Views of Mr. Geo. Quinn, Chief Horticultural Instructor.

A grower at Nuriootpa, S. Aust., published an enquiry in last month's "Fruit World" relative to "Dieback" in Apple trees, describing varieties and soil conditions. A reply was tendered by Mr. A. F. Thiele, of Doncaster, Vic., one of Australia's most experienced orchardists.

We are glad to publish hereunder the experiences of Mr. Geo. Quinn, Chief Horticultural Instructor for S. Australia, whose services to Australian fruitgrowing are of a high standard. Mr. Quinn writes as follows:—

The defect called "dieback," carrying the following external appearances, has been under observation here at intervals over about thirty years.

The first intimation of the trouble occurs when the buds on the upper portions of some of the leading shoots of fine young, vigorous trees—say, from five to six years of age upwards—as a rule, fail to shoot out with expected vigour after having been pruned during the previous winter. These upper buds often slowly grow out into short rosette-like spurs as the season advances. In the meantime, some bud or buds near to the base of the previous season's growth or lower down in wood a year or more older, start into vigorous growth, such as was expected from the tops of the leaders.

In the earlier years, these stunted terminal parts were cut away back to these lower strong growths, and those growths shortened back, as was usual in those days in the case of the leaders in the Apple trees. Frequently, these in turn failed to respond vigorously after this pruning or topping, and this led to trying the effect of not topping such shoots when they appeared. Sometimes this resulted in a slight improvement in the tree, and taking the form of a steadied down growth.

It was not a cure, however, as such trees did not wholly lose the tendency to form the stunted, rosette-like twigs on unexpected leaders. The writer from time to time submitted shoots to Mr. D. McAlpine, then Plant Pathologist to the Victorian Department of Agriculture, who vainly endeavoured to find some causal organism consistently associated with the "dieback" trouble in the Apple trees.

The writer, about 1910 or 1911, tried the effect of injecting a weak

solution of sulphate of iron

into the sap stream of two main limbs—each carrying typical "dieback" leaders—on a Rokewood Apple tree in the State Experiment Orchard at Hackney-road, Adelaide. These injections were continued over a fortnight. It cannot be claimed that any definite results were noticeable, but the tree to-day—1928—is apparently healthy and fruitful, though very little greater in stature than at the time of treatment.

This defect was very noticeable in Apple trees in the Clare district in the late nineties of last century, when a cycle of several dry winters was experienced in succession. The trees were affected on shallow soils over calcareous sublayers in red iron-stained land over clay, and in some deep, rich, black flats usually devoted to growing heavy crops of Currants.

In all instances, the sublayers were either compacted, or, as in the case of the limestone areas, uninviting to the Apple tree. With the return of a cycle of seasons enjoying soaking winter rains, the trouble, though not removed, became less in evidence as the Apple trees developed a higher degree of health.

It is a remarkable fact

that this defect is most often mentioned in the hotter portions of this State, chiefly north of Adelaide, where, with few exceptions, the varieties of Apples which survive are restricted in number. Although definite experiments have not been conducted to test the theory, the writer has a strong presentiment that the causes of his "dieback" will be found on investigation to be intimately connected with the incidence of **high summer temperatures, combined with soil disabilities revealing either physical or chemical deficiencies, or most likely both.**

"DEALERS" IN THE VICTORIA MARKET.

Discussion at Growers' Conferences. Packing and "Topping" Alleged.

Retailers Advised Not to Purchase Citrus Fruit There.

Opening Hour Debated.

The discussion at the recent Citrus Growers' Conference regarding the sale of fruit to "dealers" in the Victoria Market, Melbourne, is of interest in the light of the experience of other fruit producers and that of the Retail Fruiterers' Association.

Citrus growers state that profit made by the "dealers" (1/- to 1/6 a case, frequently it is more), should be secured by the growers. Many dealers have an unpleasant reputation for making five cases for sale out of four purchased, and similar skill in blending grades.

Apple-growers have for years recognised the problem: their solution is that the "dealers" should be placed in a separate part of the market, away from the other stands, so that purchasers would be on their guard when buying.

The Secretary of the Retail Fruiterers' Association, Mr. E. W. Thompson, states quite plainly that many of these "dealers" are dishonest. Regarding purchasers of citrus fruit, so many of his members (especially returned soldiers and others new to the retail business), have been "had" so badly that they discountenance purchasing in the Victoria Market, and recommend purchasing from standard firms in the Western Market.

Victoria Market Hours.

The Melbourne and Suburban Retail Fruiterers' Association has by resolution condemned the change in the opening hour of the Victoria Market from 4 a.m. to 6 a.m. The congestion owing to the new arrangement is so serious, states the Secretary, Mr. Thompson, that both retailers and growers will be glad for the time of the experiment to expire, so that the 4 a.m. opening can be reverted to.

Mr. Thompson further states that the market gardeners to a man are against the later opening hour.

The suggestion is that the opening hour be again placed at 4 a.m., and that the transfer of the Western Market to Victoria-street be proceeded with as soon as possible.

"FRUITGROWER PLUMPS FOR COMPULSION."

The "Citrus News" Throws a Brick.

For 29 years the "Fruit World" has faithfully represented the Australian fruitgrowing industry. Many valued reforms have been brought about through the services of this paper. To mention only one, of a long list, the "Fruit World" was largely responsible for the amending of the Victorian Factories' and Shops' Act, thus removing the restrictions on the sale of fruit in Melbourne from May to September. This was of particular service to Citrus growers in all the Australian States. A market worth £40,000 a year was saved for the industry.

We believe in the efficient organisation of growers. At the same time our columns are always open for the considered expression of opinion of readers. The "Citrus News," the official organ of the Victorian Central Citrus Association, in endeavoring to throw a brick, has probably handed us a bouquet.

In its issue of May 1, under the heading, "Fruitgrower Plumps for Compulsion," an article is reproduced from "The Mail," by Mr. E. H. Kershaw, of Wandin, Victoria. We will say at once that Mr. Kershaw is right in having the courage of his convictions and expressing his views. The Mail" we do not know, and cannot find it officially listed. Possibly the "Citrus News" did not include its full title? The editor of the "Citrus News" is welcome to inspect files in the "Fruit World" office and extracts of articles from responsible fruit papers from all over the world commending our articles and our policy of helpfulness to the Australian fruit industry. The "Citrus News" knows best why it selected some critical comments from an obscure local newspaper.

However, let us examine this article on its merits. Mr. Kershaw "plumps for compulsion." His only solution for the difficulties confronting the primary producer is "compulsory" organisation. Nothing is said of the uneconomic conditions which have placed primary producers in their present difficulties—Arbitration Court Awards are not mentioned, nor the sugar embargo. No mention is made of research work to increase crops, and reduce the cost of production. No! "Compulsion" is the panacea. Mr. Kershaw states that "Strong action is being taken to bring about a compulsory wheat pool in Victoria," but on a vote being taken the compulsory wheat pool has been rejected by the growers.

Mr. Kershaw devotes the major part of his article to the compulsory methods in the Queensland fruit industry. We should be delighted to show Mr. Kershaw and the editor of the "Citrus News" a bulky file of correspondence from Queensland growers condemning the system. Mr. Kershaw admits that the system was brought in without the growers having a vote. Does he believe in the vote? Fancy producers in a sovereign State, in a self governing community, having a new and very expensive system thrust upon them without being asked if they wanted it!

Mr. Kershaw's article reads strangely like propaganda prepared in the office of Committee of Direction in Queensland. He challenges us to disprove certain figures, particularly that the "organised" marketing system has meant a net gain to primary producers of £1,000,000. We might just as well challenge him to produce his authority for making this statement. Fruitgrowers in Queensland are asking why the C.O.D. is charging them the ton rate and then retaining the difference represented by the bulk concession rate. They say this is quite unfair. But of what use are protests when there is "Compulsion" by law?

We are charged with being ungenerous" in not completing the information regarding the fight of the Banana growers for their freedom. We have no desire to be ungenerous to any fruitgrowers' organisation. The more light shed on these matters the better.

Regarding the Queensland Banana growers, their liberty to market their fruit was taken away. We withheld nothing. A legal battle was fought and the C.O.D. was defeated. But there was not much "generosity" on the part of the autocrats in power. It was only in the High Court that the reforms of which Mr. Kershaw speaks were wrung from the "controllers."

Now, as regards the credit balance which the C.O.D. has. Will the "Citrus News," or Mr. Kershaw tell us how it was built up? Out of trading profits? Or out of levies and railway concessions, refunds which should long ago have been paid to the growers. This is how a well-known Queensland Banana grower describes it:—

"Honestly, this 'profit' is all that remains after a year's spending of the growers' freights—we pay the C.O.D. ton rates, but the C.O.D. goes on building up reserves on our money, viz., the bulk concession rates which we qualified for by organising the fruit train—years before the C.O.D. was dreamed of."

The "Citrus News," through Mr. Kershaw, speaks of compulsory rule of keeping to the left of the road, compulsory education, compulsory health Acts, compulsory six o'clock closing, etc., then follows the obvious suggestion of compulsory organisation in the fruit industry.

But the analogy was not carried far enough. What of compulsory organisation in every other primary and secondary industry? Are we to have our lives regulated on military principles, compulsorily rising at Reveille, compulsorily retiring at Last Post, and compulsorily parting our hair in the middle?

It would do Mr. Kershaw good to go to Queensland, and get first hand impressions of the compulsory system there. On the way he might stop at Canberra and then ask the "Citrus News" to republish the following from a leading daily newspaper of May 12:—

"At Canberra there is socialisation in excelsis. The Government owns everything does everything, fixes the hours that the shops must close; gives you light or withholds it; makes the roads and the footpaths when there are any; prescribes that you shall walk in circles if you aim to get from one spot to another. And it owns all the land; builds directly or indirectly through contractors all the houses; fixes the rents; makes the gutters; helps to flood your ground with rain water, then cleans it away; supplies you with electricity; settles the price of your firewood, and tells you how often you may ride in a conveyance, or whether there need be any conveyance at all.

"The man who believes in national control, or in the supreme wis-

dom of Governments, has here his opportunity. He sees the cold and clammy hand of authority everywhere. Local government for purely local affairs is only a vision. Local representation on the commission is an aspiration. The people have no vote for Parliament, nor vote for a local Council, nor any control over the Commission; they feel the weight, and grow restless under the chafings of autocracy.

It would be interesting if the "Citrus News" would make an editorial announcement of its policy and stating—(1) whether or not the "Committee of Direction" system operating in Queensland is advocated, and (2) if they approve of that system having been enacted without giving the growers a vote.

An interesting comment in this connection was recently made by Mr. W. E. Branson, Market Representative of the V.C.C.A. Mr. Branson said: "I do not believe in proposals for compulsion. The only 'compulsion' necessary is that of efficiency."

PERSONAL.

Mr. H. G. Such, manager of the Central Citrus Association of N.S.W., is in New Zealand, attending to matters relating to the export of citrus fruits from N.S.W. to the Dominion.

Mr. P. S. McDermott, who was until recently manager of the Packing House Company at Gosford, N.S.W., is now the assistant manager of the N.S.W. Central Citrus Association.

The Excello brand of Oranges, packed by the Griffith Producers' Co-operative Co., has won an excellent name on the Australian market and in New Zealand.

Fruitgrower on World Tour.

Mr. V. C. Williams, Chairman of Directors, Griffith Producers' Co-operative Co. Ltd., accompanied by Mrs. Williams, is now on his way to Europe, via Java and Singapore. While away, Mr. Williams will make a study of marketing conditions in other countries. They will return via U.S.A.

Pioneer Retires.

Mr. J. Lang, J.P., one of the pioneer fruitgrowers of Harcourt, Victoria, is still hale and hearty, despite his 84 years of age. Mr. Lang is a noted horticulturist, and has freely given his time as a Judge at Shows. He was a valued member of the Pomological Committee. Mr. Lang has retired from the active work of fruitgrowing, and now resides in one of the Melbourne suburbs. Mr. Lang started fruitgrowing at Harcourt in 1861.

WEST AUSTRALIAN VISITORS.

Two interesting visitors from Western Australia called at the "Fruit World" office—Mr. A. C. R. Loaring, Secretary Western Australian Citrus Association, and Mr. H. Harper, manager of the Producers' Markets, Perth. These gentlemen attended the annual Interstate Citrus Conference held in Melbourne early in May.

Mr. Loaring speaks of the excellent quality of Oranges and Lemons produced in Western Australia. There are large areas suitable for citrus-growing in the Chittering Brook valley. Excellent Oranges are grown without irrigation. West Australia harvests about 150,000 bushels of Oranges per annum.

Mr. Harper tells of the success of the Producers' Market. The market is owned by the primary producers of Western Australia. The turnover last year was over £270,000. The company pays a dividend of 7 per cent. to the shareholders and a bonus to grower shareholders, according to the quantity of produce which the grower markets through this organisation. The fruit and vegetables are sold by auction at a commission of 7½ per cent. Although there are other wholesale markets in Perth, the growers' organisation has evidently made a success of this enterprise.

TASMANIAN VISITS MAINLAND.

Mr. H. G Heywood, of Sidmouth, West Tamar, Inspects Victorian Orchards and Cool Stores.

Tamar Against "Control" Proposals.

Mr. H. G Heywood, of Sidmouth, W. Tamar, Tasmania, visited the mainland during May, and inspected a number of the Victorian orchard districts.

On Mr. Heywood's orchard, Apples are mainly produced: he has, in addition, a few acres of Pears, mainly Williams. The Apple varieties have been steadily worked over, until now four varieties are specialised—Jonathan, Cox's Sturmer, and Crofton.

Apart from the oversea export, the fruit is marketed mainly in Sydney: there is a direct cargo boat between the Tamar and Sydney. Sometimes it is possible to load at Beauty Point for Sydney, but at other times the fruit has to be sent to Launceston by river boat or motor truck: there are no railways in the Tamar districts.

At Beauty Point, oversea vessels call for the fruit for export. Prior to the ships calling there, it was necessary to send by rail to Hobart, the additional charges and extra handling being handicaps to the growers.

Mr. Heywood states that there are heavy crops of fruit in Northern Tasmania this season. As regards the district generally, the orchards planted on good soil are thriving, but trees planted for absentee owners on poorer land are being grubbed out.

On what appears to be rather poor soil, Mr. Sandberg has a nice orchard at Swan Point. By dressing the land with manure, satisfactory crops are being harvested. The Cox's Orange Pippin trees this season are producing from six to eight bushels per tree.

Many local orchardists are selling their fruit f.o.b., and this is deemed to be a better arrangement than consigning to distant markets.

Mr. Heywood states that in common with many other growers, he voted against the Export Control Bill, as this proposed form of compulsion was not deemed necessary.

FROZEN GRAPES.

California packers are experimenting with trial shipments of frozen Grapes to New York, where it is hoped to develop a market for them when Grapes are "out of season."

The fresh Grapes are packed in barrels and the crevices filled with fresh unfermented Grape juice. The entire contents are then frozen solid. The barrel is then closed in and placed in cold storage until time of shipment.

Grapes treated in this manner must always be kept in a refrigerator when travelling either by boat or train. At their destination, the barrels must go immediately into cold storage while awaiting purchasers.

WESTERN MARKET, MELBOURNE.

Mr. H. Wilson, who until recently was a partner in G. Woolf & Sons, has opened a business under his own name as a wholesale merchant and commission agent at 56 and 58 Western Market, William-street, Melbourne. Mr. Wilson is one of the accredited agents of the several Citrus Associations of Australia. Mr. Wilson is open to receive consignments of fruit from all parts of Australia.

Tasmania

Export Notes : New Apple Evaporator : Bounty on Dried Apples : District News and Notes

(By Our Correspondent)

THE APPLE EXPORT SEASON to overseas markets is now drawing to a close, and by the time the last vessel (the s.s. "Cathay") has completed loading in June, the total shipments will be in the vicinity of 2,500,000 cases.

The returns for the early shipments have proved very disappointing, and will leave little margin to the producer over the costs of production and export. Although American and Canadian shipments were less than in previous years, and the competition from this source of supply was not so keen, the expected demand for Australian fruit was not experienced. Reports that have recently been received indicate that

low purchasing power

of the community was the deciding factor.

When it is considered that in the flush of the American export season the markets of the U.K. receive much in excess of the present export from Australia and New Zealand, and that a lot of this fruit comes into competition with European grown fruits, the increase in exports this year should not result in glutted markets. The matter is serious to Australian exporters, and the position we have reached should be examined with a view to ascertaining the true season for the depreciated prices.

Apple Packing Competition.

A competition was recently arranged to take place at Franklin to decide the local championship, the event being held in conjunction with the annual fruit show. Unfortunately, the weather prevented several of the competitors from attending, and the number of entries were under those expected. After a keen contest, Mr. W. Armstrong, of Cradoc, was adjudged the winner, scoring the following points:—

Size, 2½in., time, 2 min. 37 sec.; size 2¼ in., time, 3 min. 38 sec.; points, 20; compactness 8, wrapping 7, alignment 10. Total, 45 points; possible, 50.

The competition was decided on the "best packed cases of 2½ in. and 2¼ in. Sturmer Pippins, the Fruit Expert (Mr. P. H. Thomas) acting as judge and awarding the points in the different sections.

Carriage of Fruit.

Reports have been received that certain vessels carrying Apples to the U.K. have discharged their cargoes in bad condition. In instances where indications point to faulty carriage, claims have already been made. The State Fruit Advisory Board are taking up this matter on behalf of the industry, and have requested the National Fruit Trades' Association to take similar action in respect to all vessels discharging their cargoes in bad order.

New Apple Evaporator.

Mr. R. Harvey is losing no time in replacing the Apple evaporating plant which was destroyed by fire at Cygnet recently. Plans are already in hand for a new and improved building, which will be pushed forward so as to be available at the earliest opportunity. A commencement has already been made on the construction of the "pie Apple" factory, and Messrs. W. D. Peacock hope to have this in operation before the end of the season.

The destruction of the factory was a serious loss to the district, as besides affecting the employment of about 90 hands, the growers were deprived of their principal means of disposing of their lower grades of fruit in a season of abnormal production.

Collins Vale Show.

Collins Vale, situated 900 ft. above sea level, and about nine miles from Hobart, is perhaps the latest fruit district in the State. The district possesses a very keen Horticultural Society, which each year make a special feature of its Autumn Show.

This was held in splendid weather, and attracted a good attendance from the surrounding districts.

A feature this year was the splendid number of entries received for the packed fruit exhibits, and the general quality of the fruit enabled a fine display to be made.

The principal class for the "best three cases of export Apples," was annexed by Mr. V. Farley, staging Cleopatra, Tasma, and Jonathan varieties. This award carried the championship of the district, and Mr. Farley deserves great credit for his success, as a new exhibitor.

Other competitors who were successful in the different sections were Messrs. A. V. and W. C. Cooper, H. McKay Calvert, and B. Zanotti.

Bounty on Dried Apples.

After nearly three years' consideration and investigation of the request of the Fruit Advisory Board for a bounty on dried Apples exported to overseas markets, a reply has been received from the Prime Minister that the Commonwealth Board of Trade had given consideration to the matter, and would not recommend the granting of the request; but that a further investigation of the dried Apple industry would be undertaken in order to ascertain at what cost dried Apples for export could be produced.

The decision was communicated to the State Fruit Advisory Board at the last meeting, and members expressed their regret that the decision was not in favour of the application.

The view was expressed that the

costs of the investigation

already made would very nearly pay the bounty which was requested on the amount of dried Apples which would be exported this season, and it was considered that the absence of the Tasmanian representatives on the Board of Trade when the question was under discussion did not enable the case to be properly put from the Tasmanian viewpoint.

June Shipments to Overseas Markets.

At different times, the possibility of extending the overseas shipping season has been mentioned by those visiting the English and Continental markets, and exporters have been advised that an interval exists on the English markets between the European early soft fruits and arrival of the early Apples and Pears that might readily be filled by late Australian Apples.

This season a vessel has been engaged to test the overseas markets at this period, and space on the s.s. Cathay has been reserved for mid-June, also the probability of another vessel being obtained at about the same time is reported.

The varieties that will be shipped in this vessel are Sturmer, Tasma (Democrat), Granny Smith, and Crofton.

The Ronaldson Tippett Motor Sprayer is brought prominently under the notice of readers in this issue. The manufacturers, whose head office and works are at Creswick-road, Ballarat, direct attention to various points of excellence in construction, its dependability, efficiency, and economy. Details are included in their advertisement in this issue, and further information may be obtained on application to the firm.

South Australia

Crop Prospects :: Pure Fruit Drinks :: Apple Export.

SOUTH AUSTRALIA.

Citrus Crop Prospects in Adelaide Districts.

Pure Fruit Drinks.

Why Retain the Name "Poorman" Oranges?

Interesting information is to hand from Mr. W. J. Kimber, Secretary of the South Australian Fruitgrowers and Market Gardeners' Association, as follows:—

Salisbury District.—Navels, medium; commons, medium; Mandarins, good; Lemons, fair; Poorman Oranges, good.

Torrens Valley.—Navels, very light; commons, medium to good; Mandarins, good; Lemons, good; Poorman Oranges, good.

About 40 growers met at Payneham on 22nd May, and many matters of interest were discussed, the principal one being the great necessity of insisting that the sellers of citrus drinks should supply the

pure juice of the fruit,

as unless they do so, the public will refrain from using the drinks offered, and a most important mode of using citrus fruit will be lost. The meeting was gratified to know that offenders had been punished in Victoria, and decided that a vigilant watch be kept to prevent the sale of drinks which are not up to standard.

The

marketing of immature fruit

was discussed, and it was decided to interview the Government and ask that legislation be enacted to prevent the sale of Oranges which do not contain certain sugar contents. It may be too late to get the necessary Act passed to operate this season, but it will be attended to before the next. It is very essential that in a matter such as this there be hearty co-operation by citrus growers in all the States.

The suitability of Poorman Oranges for making citrus drinks was emphasised by many present, who had tried them, and said that they were better for the purpose than any other Grape fruit grown. They must be ripe, and those who have not yet tried them are advised to do so, and it will not be long before it is much used for making a "Grape fruit" drink.

It also seems just about time that the names "Poorman" and "Grape Fruit" were dropped and more appropriate ones used!

The market is over-supplied with Apples, and very low prices have to be accepted by the grower.

SOUTH AUSTRALIAN FRUIT.

Marketing Apples in Europe.

Mr. R. M. K. Lewis, Trade Commissioner for South Australia in London, writing to the Government Produce Department, stated that the facilities for the handling and sale at Hamburg, Germany, are of the very best. Brokers were anticipating 500,000 cases of Australian Apples this year, and were confident that this quantity could be handled satisfactorily. Mr. Lewis found that the fear of American Apples competing with Australian fruit was considerably reduced by the fact that leading importers had laid their plans to curtail American supplies, and to concentrate on Australian and New Zealand Apples. Another reassuring factor was the increase of wages in Germany, generally.

Poland and Belgium are likely to prove poor markets for wrapped Apples, owing to the tendency of these countries to regard them as luxuries, and the imposition of an import tax. Apples imported into Belgium in barrels (unwrapped), pay five francs per 100 kilos, while the wrapped Apples in boxes pay 150 francs per 100 kilos. This means that the duty on unwrapped Apples is 1¼d. per bushel case, and 3/2 per case on wrapped Apples.

Mr. G. W. Pope, general manager of the Government Produce Department of South Australia, states that the Hamburg market is healthy, for one buyer recently bought Cleopatras and Dunn's Seedlings from the Department at 9/3 per case F.O.B. Port Adelaide.

SOUTH AUSTRALIAN APPLES IN LONDON.

The Trade Commissioner for South Australia (Mr. R. M. K. Lewis), has cabled to Government Produce Department, that Apples shipped on steamers "Ferndale," "Largs Bay," and "Mooltan," brought the following prices:—

"Ferndale": Cleopatras, 15/-; Jonathans, 13/- to 14/6; "Mooltan": Jonathans, 12/- to 13/6; "Largs Bay": Cleopatras 13/-, Jonathans 12/-, other varieties 11/-.

The supply of American Apples was smaller than in previous seasons, and South Africa is only sending small quantities. Supplies of home-grown Apples are by no means exhausted, and there are considerable quantities in cold storage still to be marketed.

South African Shipments of Grapes and Pears, however, have been considerably larger than in previous years, and so far this season, Africa has shipped about 1,580,000 cases of deciduous fruits, or 480,000 more than the same period last year.

Large shipments of **Oranges** from Jaffa and the Valencia district, have been sent to London, and considerable quantities of Grape Fruit continue to arrive from United States.

South Australia has experienced a wonderful season for Apples, and up-to-date has sent 486,695 cases. The previous best season for South Australia was 328,600 cases.

Unless the gross average for Apples is round about 12/- to 13/- per case, sales will not be profitable, as the actual costs of shipping and selling charges, cost of cases, packing, railage, etc., is approximately 8/6 per case.

Growers are not entirely at the mercy of the markets this season, as at least half of the total shipped has been purchased by overseas buyers on F.O.B. or C.I.F. terms, and prices have been favorable to the grower.

BALANCED FERTILIZERS.

An unusually heavy crop of fruit takes a great deal of plant food out of the soil. Intelligent fertilising, with the necessary mineral requirements, water, nitrogen, phosphoric acid and potash will remedy this. Modern science in the mixture known as "Nitrophoska," has aimed at a balance of food ration and concentration, embodying all these elements. In the case of deciduous trees and vines a greater proportion of phosphate may be necessary, and can be supplied by top-dressing with superphosphate early in the spring. Owing to the heavy rains this autumn the proportion of nitrogen will also need to be increased. "Urea" is another preparation of the same type, and has already given excellent results with Citrus and market garden crops.

Queensland.

A satisfactory season with temperate fruits—Bananas and Pineapples in plentiful supply—heavy citrus crop coming—bud selection is approved—Banana experiment stations to be established—compulsory spraying of Tomatoes and Potatoes—fruit industry is developing on good soils; poorer land must go out of fruit production.

(By Our Correspondent.)

THE SUMMER FRUIT SEASON —now terminated—has been fairly satisfactory. Though prices were slightly below the average, this was compensated by increase in crops, and really first-class lines invariably secured good returns.

Amongst Apples, Stanthorpe provided excellent lines of several varieties, but particularly Jonathans, which are unequalled by southern specimens which annually grace our shop windows.

The quality of **Grapes** has also been exceptional, and the get-up of the fruit generally most inviting. Of course, there are exceptions, and probably always will be, until inferior orchard land goes out of cultivation and the tired orchardist changes his occupation.

These important features are overlooked—one could almost say deliberately ignored—by those who so loudly acclaim the indifference of the Government toward "improving" the industry.

This applies particularly to temperate fruits, and citrus especially, the latter where the semi-official part-organisations of the C.O.D. are either deficient of the faculty of observation, or totally unappreciative of the requirements of trees or plants.

The plain fact that inferior soils, no matter how treated, cannot profitably compete with those where the requisite condition is provided by Nature is never mentioned.

Unfortunately, an undue percentage of orchards, also Pineapple and Banana plantations, are not situated in soils which any stretch of imagination could class as moderately suitable.

Much of this is attributable to the boom infused by land agents, but that all purchasers are not so easily satisfied was demonstrated in the Brisbane Court recently, where a defrauded (the jury agreed that he had been) purchaser sought rescission of sale and damages from the vendor and agent for misrepresentation. After a trial extending over eight days, the jury decided in favour of the claimant on all counts.

Heavy Citrus Crops.

The citrus crop this season is above the average, both in quantity and quality. The Howard and Burrum districts have railed their early fruit to the southern markets, and are generally satisfied with the returns.

Local markets are fairly well maintained, but have to face the competition of other fruits, mainly southern Apples, which are being disposed of at low rates.

Bananas have been fairly plentiful, and consideration is already being given by country associations to the disposal of the spring crop, which, it is reported, will exceed southern requirements.

The **Pineapple** crop was satisfactory from all aspects—a liberal supply of fruit, and its disposal at satisfactory rates. During the warmer months, a keen demand existed for the plants (suckers), and this branch of the industry is viewed optimistically. Bowen has again entered the field as a producer, and further north consideration is also being extended to Pineapple culture.

Custard Apples have been in plentiful supply, and owing to sudden and sustained rise in temperature, ripened up rapidly, causing a temporary glut, which will have its advantages in causing this delicious fruit to become, on account of reduced prices, to be much more widely appreciated.

The generous rainfall, in places amounting to excess, has given all forms of vegetation a good start, except in some of the lower and also imperfectly drained localities. The effect is not always noticeable immediately, but with the return of more humid conditions under warmer temperature, this will show out conspicuously.

The **Tomato**, now classed as a fruit (it had always been so in this State), will command distinction under the heading. Though Bowen, in the North, is the main exporting centre, various other districts contribute their quota, in addition to supplying the local markets. Weather conditions have lately been favourable to the development of blight (phytopthora), and this disease has already made its appearance. Though so readily preventable by fungicides, the average grower trusts to luck—so much so that it has been decided to make spraying compulsory on both this and Potato crops.

The planting season has now begun, but the demand for trees is not excessive, and except in the case of temperate fruits, can be more than met by local stocks.

In citrus fruits, an effort is being made toward standardisation by

limitation of varieties,

the nurserymen readily falling in with the idea to propagate only varieties listed by the Department of Agriculture, and instruction in working over surplus varieties in established orchards is expected from the Department's officers.

From a general view, the fruit industry looks promising, though it is obvious that inferior places must go under, ultimately to the benefit of the holder who is battling against insurmountable difficulties and the earlier they are reorganised, the better. We have ample land and facilities to produce the best in plentiful supply. Will those who are concerned and are possessed of average intelligence admit the situation as it exists to-day, and substitute legitimate effort to rectify it, instead of pandering to pampered fancies founded on false hopes?

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

The Banana industry is getting a fresh kick off by the establishment in north and south of experimental stations—one in each. The most interesting feature is the northern station, where much can be accomplished beside Bananas, and the Government are to be congratulated upon their effort, even though it is somewhat belated.

BRISBANE

F. B. BOLTON & Co.
ALBERT HOUSE,
BRISBANE.

Brokers and Selling Agents for

FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

We sell to wholesale Distributors only, and do not handle growers' consignments.

We act as Railway Freight Agents for growers' joint truck loadings, and secure lowest freight rates.

On Forward Sales of fresh fruit we act for sellers and collect cash in exchange for delivery order.

COVENT GARDEN,
LONDON

Ridley, Houlding
& CO.,

Large Receivers of Australian Fruits.

Solicit Consignments of

Apples, Pears, &c.,

Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

THEY'RE SELLING IT NOW.

Two of Melbourne's "out of work army,'" passing along the top of Collins-street, saw a notice outside a church—"Sale of Work." "What do you know about that?" said Bill to his fellow unfortunate. "They're selling it now."

APPLES AT STANTHORPE (Q.).

High Quality Fruit is Growing.

"Unsatisfactory Trees on Northern Spy Stock Have Been Supplied."

The Editor, "Fruit World."

Sir,—In your issue of 1st May, p. 182, the following paragraph appears under the heading, "Queensland":—

"Stanthorpe. — Apple-growing is fast going out of favour, owing mainly to the unsuitability of the soil for that purpose."

Now, the foregoing statement is a gross libel on the Stanthorpe district, and it is regrettable that such a wilful misstatement should have been published in your journal.

In the first place, Apple-growing is not going out of favour. The fact is, that plantings are restricted owing to the difficulty in obtaining satisfactory nursery stock. A large percentage of Apple trees supplied to growers in this district in recent years have been absolute rubbish. Only a few months ago the writer was requested by a meeting of fruitgrowers' representatives to submit to the Department of Agriculture, Brisbane, specimens supplied by a Victorian nursery. These trees were typical of many sent up here: no wonder the "Northern Spy" stock is now regarded with suspicion, and growers are seeking something better.

Judging from the average quality of the Apple trees supplied by southern nurseries (our only source of supply), this district appears to be considered a convenient dumping ground for all their worthless stuff. Mr. J. M. Ward, Chief of the Victorian Horticultural Department, can confirm my remarks regarding the nature of trees supplied us.

Secondly, the soil is not unsuitable. The various exhibits sent from this district to the Royal Shows in Sydney were scarcely inferior to those from other States, and Mr. F. Chilton, of Sydney, who has been fruit judge at the Stanthorpe Show for many years, can bear testimony as to the excellent quality of the Apples exhibited, and has on more than one occasion publicly declared his opinion that for quality and color, they could not be excelled.

It is true that many of our Apple trees are not satisfactory, but other causes contribute to this. It is the general opinion of observant growers that the "Spy" stock is not suitable to our conditions, and a strong demand exists for seedlings. I enclose herewith a photograph of an Apple tree (one of five) in Mr. W. J. Long's orchard at Glen-Niven. This tree is over forty years old, spread 24 ft. in vigorous condition, worked on seedling stock, and this year yielded 25 bushels, and has averaged 15 bushels for the past five years—thus proving that, given the right stock, our soil is not unsuitable.

In common with fruitgrowers in the south, we have sufficient handicaps,

Fruit Shipments
United Kingdom
and the Continent

W. D. PEACOCK
& CO.

24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.

Manufacturers IXL Jam and Canned Fruits.

Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.

All Orchard Supplies available at all times.

Agents for—

Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.

H. JONES & CO. LTD.,
HOBART

without having the reputation of our district defamed by some amateur correspondent. Perhaps, when he realises his mistake, he will have the manliness to make the "amende honourable" in your next issue.—Yours,

D. PFRUNDER.

Applethorpe (Q.)., 15/5/28.

(Photograph will be published next issue.—Ed. "F.W.")

WESTERN AUSTRALIA.

Helpful Seasonable Hints.

(By G. W. Wickens.)

PRUNING of all deciduous trees should be pushed on with during this month (writes Mr. Geo. W. Wickens, Superintendent of Horticulture for W.A.).

Planting may be undertaken wherever the soil is not too wet and sticky.

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT, London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

Young plants when received from the nursery, should be heeled in carefully, so as to prevent the roots from drying out. To do this effectively, the bundles of ten, in which the nurserymen usually tie up the trees, should be opened, and each tree placed separately in the soil. If this is done as soon as the trees arrive, no harm will result if the planting has to be postponed for some weeks in the months of June or July.

The notes on planting for this month refer to deciduous trees only. Citrus trees give best results if planted at the latter end of August or early in September.

Any San Jose scale-infested orchards which have not received the first spraying mentioned in notes for May, should be treated as early as possible this month.

Citrus growers should examine cracked Oranges for signs of fruit fly, and destroy any found to be infested.

The Orange export season commences this month, and this opportunity is taken again to stress the importance of handling the fruit most carefully when gathering, packing and loading. Bruised fruit and fruit with skin abrasions caused by finger-nails will develop moulds and land in England in an unsaleable condition, a loss directly to the sender to the extent of the affected fruit, and indirectly and probably a much greater loss in bearing down the price of sound fruit offering on the same market.

NO CODLIN MOTH IN WESTERN AUSTRALIA.

Successful Fight for 25 Years.

NO APPLE IMPORTS FROM EASTERN STATES.

Western Australia, with an area of Apples and Pears of 11,022 acres, holds the unique distinction of being free of the destructive codlin moth.

In 25 years, 1903-1928, there have been eleven outbreaks of codlin moth, all of which have been quelled.

The foregoing is stated by G. W. Wickens, Superintendent of Horticulture, in leaflet No. 243, just issued by the West Australian Government.

After describing their sanitation methods and the losses that would be incurred should the pest become established, the bulletin continues: "Western Australia will harvest in 1928 the lightest Apple crop produced for many years past, one that perhaps will not be much in excess of the quantity required for use within the State. This may mean that later in the season, if Apples become dear in the retail shops and barrows, **the general purchasing public who are not fully cognisant of the full details of the case, may agitate for the introduction of Apples from the Eastern States, where a bumper crop is being gathered, and which both Commonwealth and State regulations at present prohibit from being sent to Western Australia.**"

OBITUARY.

In the regretted death of Mr. E. N. Barton, fruitgrower, of Kyabram, Vic., the industry loses a valued helper. Mr. Barton took an active interest in all matters affecting the welfare of the industry, and was always ready with advice and assistance to those who needed it. Our full sympathy goes out to his family and relatives.

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET, Melbourne

"YARRA"
BRAND
SPRAYS
PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street / 155 Yarra Street } Abbotsford, Vic.
Tasmanian Agents—
H. L. HOPKINS, HOBART

THE BULB MITE.

The ravages of the bulb mite in Australia are becoming increasingly apparent. The position is serious. Prominent Victorian bulb growers, including Mr. Alister Clark, of Bulla, have had alarming losses because of this pest. From all quarters there are reports of the serious nature of the depredations of the dreaded bulb mite.

The subject warrants close investigation by scientists.

DRIED FRUITS DEPARTMENT.

Preference with New Zealand.

THE Mildura District Council of the A.D.F.A. placed before Dr. Earle Page, Federal Treasurer, while he was visiting Mildura recently, the following statement on New Zealand preference:—

As New Zealand does not produce Currants, Sultanas or Raisins, preference, if granted in these fruits, will not in any way interfere with the producers of New Zealand. Such action by New Zealand would be entirely in accord with the spirit of the recommendations of the Imperial Economic Committee, which places the order in which preferences should be granted, as—

First, produce of our own country.

Second, preference to countries within the Empire.

Third, preference to foreign countries.

The first preference is quite sound because every country should protect its own producers before those of other countries. We recognise that this makes the matter of a reciprocal preference with New Zealand difficult because New Zealand is asking for preference on primary products which are produced in Australia, and would compete against our own producers, and, in not granting these preferences, Australia is acting fully in accord with the recommendations of the Imperial Economic Committee.

We trust that the Federal Government will still continue negotiations for preference for dried fruit on the grounds that New Zealand can grant Australia preference on this product without penalising their own producers, thereby giving producers in the British Empire preference over America and foreign countries.

Australia has for very many years successfully supplied New Zealand with Currants, Sultanas and Raisins against the competition of Greece, Smyrna and Spain, but of recent years U.S.A. has captured a considerable amount of the New Zealand trade, for the reason that they are offering fruit at ridiculously low prices, which are very much below actual cost of production to the grower; to such an extent is this the case that properties are going into the hands of aliens.

New Zealand will not suggest that U.S.A. is a large buyer and friendly customer for New Zealand produce, the general experience being that America wishes to sell all her products to other countries, but quickly establishes prohibition against the importations of any produce which may compete with the U.S.A. producers.

In asking for preference on this basis, we feel that the ideals of New Zealanders and Australians are similar, we all ask for a reasonable standard of living, and do not expect goods at below cost of production.—"A.D.F.A. News."

EASTERN MARKETS.

Dried and Canned Fruits.

Agencies for the handling of Australian dried and canned fruits have been established in Shanghai, Hongkong, and Canton by Mr. H. L. Pang, managing-director of Louie Pang and Co., who has returned to Melbourne from the East. He was convinced that Australian tinned and dried fruits were better than American brands on the Chinese market at present.

Mr. Pang suggested that a business delegation be sent to the East to display and advertise Australian goods, as the products of Australia were almost unknown in China.

LONDON SALES.

The Chairman of the Commonwealth Dried Fruits Control Board advises that the sales of Australian dried fruits in Great Britain recorded with the London agency of the Board for the week ended May 3rd, 1928, represented:—

Sultanas, 204 tons, at an average price of £56/7/6 per ton.

The total realisations of last season's fruit in Great Britain are:—

Sultanas, 19,360 tons, at an average price of £58/1/10 per ton.

Currants, 4,809 tons, at an average price of £42/11/- per ton.

Lexias, 2,026 tons, at an average price of £43/10/9 per ton.

DRIED FRUITS.

A Comparison.

During 1927, Greece exported 76,848 tons of Currants. Of this total, United Kingdom took 56,700 tons. Australia produces 11,000 tons of Currants, and last year sold 4,775 tons in United Kingdom.

THE GORDO CROP.

About 75 Per Cent. to be Exported.

The Gordo crop for 1928 is good, and there is every indication that the figures for 1928 will be equal to 1927 (around 6,000 tons). About 75 per cent. of this fruit will have to be exported. Prospects for sale of this fruit in export markets are not bright. Prices ruling in Great Britain are £34 per ton, which will net growers £17 per ton. Prices quoted to Canada average £42 per ton, which will net growers £30 per ton.

There is no indication that Canada is willing to purchase at the prices quoted, and they will have to be substantially reduced to capture the trade to the extent required to clear our export proportion. This must reduce returns below £30 per ton.

THE CURRANT CROP.

The Currant crop (as a result of frost damage) is extremely light this year, and will probably net £40 per ton. The total Australian crop for 1928 will be between 5,500 tons and 6,000 tons, as against 11,500 tons in 1927. Two-thirds of this crop will be sold in the Commonwealth market at protected values, and the export quota will be sold in markets on which we have a preferential tariff. The net return to the grower will probably be £40 per ton, but the fact must not be overlooked that this is mainly due to the short crop. Growers were advised to dry this fruit, and the quantity sent to the distillery was small in consequence.—"A.D.F.A. News."

Some years ago, a number of packing sheds were erected in the dried fruits areas in opposition to the Australian Dried Fruits Association sheds. There was a considerable breakaway from the A.D.F.A. for a while, but later reports indicate that the A.D.F.A. has now been considerably strengthened.

In the Mildura district, of 21,000 tons delivered to all sheds, only 250 tons are outside the Association.

At Nyah and Woorinen, 3,800 tons went into the sheds, and 500 tons were outside the A.D.F.A. In 1927, the whole of the Murrumbidgee pack was outside. This year it is the other way about. It all went to the A.D.F.A. sheds.

In West Australia two years ago, all sheds were outside the Association; now all but one are inside.

In South Australia the position is different, and 1,250 tons go outside, out of a total pack of 5,000 tons.

UNROOFED RACKS.

Make Poor Season Worse For Dried Fruits Grower.

(By J.L.C.)

The dried fruits industry of Northern Victoria had one of the worst seasons for many years. Crops were small and growers experienced a bad drying season. It was what is termed a "2 crown season."

Very little of the higher grade fruit (4 crown) was sent to the packing sheds, in comparison with the lower grades. One of the reasons for low grade fruit during a bad drying season, is the short-sighted policy of growers who do not cover their drying racks. The reason advanced by many of the growers for not erecting a roof over the racks, is the question of expense. They say that they cannot afford to spend money on roofing, but the experience of the past season should clearly indicate to them that they can no longer afford to neglect this important factor in dried fruit production.

The effects of the weather on uncovered fruit was particularly noticable this year, and the losses on uncovered fruit in some districts would amply cover the cost of roofing the racks.

Everything depends upon the weather for drying Sultanas and Currants and during February and March particularly, hot dry weather is anxiously looked for by the dried fruits grower.

If rain falls during the drying of the fruit, any that is not on covered racks suffers severely, and has to be taken off the racks and laid out on hessian to dry when the weather clears up.

The time and labor involved in redrying wet fruit should surely convince growers that **roofing of racks is absolutely necessary**, apart from the detrimental effect upon the grade of the fruit.

Hot Dip Favored.

Throughout the Grape country of the Mallee, opinions differ with regard to the best method of dipping the fruit, and until the cold olive oil dip has been proved to be the most profitable, growers will, in the majority of cases, continue to use the hot caustic dip. Many growers tried the cold process last year, but the length of time taken up in the drying of the fruit, and the extra rack room required, made the majority of them revert to the old system this season.

Packing Shed Improvements.

One of the features of the industry is the vast improvements that have been made at the packing sheds to handle the fruit. Machines remove the dust and stalks, and grade the fruit.

Machines put the boxes together, and machines pack the fruit. Machines brand the boxes, each box bearing a description of the grade it contains, and the name of the factory where it was packed.

It is highly proficient, this work of packing the dried fruit crop at the Mallee sheds, and an eye-opener for those who think that speed and efficiency only apply to the big cities.

FRUITGROWERS

FOR YOUR FRUIT CROPS USE

. . FITZGERALD'S . .

Pure Bone Dust

Always Gives Best Results

Price £9 - 10 - 0 per ton

On Rails Oakleigh

Full particulars

P. Fitzgerald & Sons

Bone Dust Manufacturers

WARRIGAL ROAD, OAKLEIGH, VIC.

GARDEN PEAS.

Profitable Vegetables to Grow.

A GOOD BATCH OF PEAS can now be sown where the soil conditions will allow. It is no good attempting to sow any seeds when the ground is very wet; it is much better to wait, even if this means standing over to next month.

A good friable soil, well drained, and where a maximum of sun can get at it, is the ideal for this time of the year, as the ground is practically cold, and will remain so for some time to come.

If the ground were well manured for a previous crop, so much the better, as Peas resent fresh manure; a dressing of lime before planting is all that is required.

Select a nice dry day, tread the soil firmly, and give a good raking to get a fine seed bed; mark off the rows about two and a half feet apart, and draw out double rows six inches apart. Sow about three inches deep, and allow about 1½ inches in the rows.

After sowing, cover over the drills, and rake level. As soon as the Peas are through, keep the Dutch hoe moving as much as possible, and this allows the sun and air to penetrate. When the Peas are about three or four inches high, draw up some soil to them to help support them, and if some twiggy sticks are available, so much the better, or stakes and a few strands of strong string placed each side will do. This enables one to keep the ground stirred, and the sun to warm the ground and maintain growth, and also it keeps the foliage clean and free from decay.

The English Wonder type, called first early varieties, are the best to sow for the time being. Among these are English Wonder, Pioneer, and William Hurst.

New South Wales

(By Our Correspondent.)

Just returned from the Melbourne Conference, Mr. McDermott, acting Secretary of the Central Citrus Association of N.S.W., is greatly impressed by the wonderful work of the Victorian Railways Department in promoting the consumption of fruit, and particularly in stimulating the public desire for pure fruit drinks.

Strenuous efforts are to be made here to enlist the co-operation of the N.S.W. Railway Commissioners in carrying out similar work, and plans are afoot to give an impetus, by various other methods, to the popular consumption of fruit and pure fruit drinks.

SULCAR
CARBONISED SULPHUR
Spraying Mixture.
THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED
DOES NOT BURN.
Manufactured by
SINCLARE & Co.
BOX 3, KING ST., P.O.-SYDNEY.
(Works, Alexandria)

Bud Selection.

At last this problem is being tackled seriously. The Fruitgrowers' Federation, Central Citrus Association, Nurserymen's Association, and the State Government are co-operating in the formation of a body to control the selection of buds, and to ensure that growers will be protected against the purchasing of trees that are inferior, unsuitable, or "not according to label."

It is recognised that the scheme will take some time in maturing to the stage where its value can be appreciated, but it is encouraging to know that a start has been made.

Citrus Crops.

Silettas are now appearing in the markets, and to a lesser degree navels.

The season's crop of Oranges will be heavy; Mandarins about the same as last year, but the crop of Lemons will be light.

Batlow Packing House and Cool Stores have opened an Apple and Pear store in Hunter-street, Sydney. Buyers were so numerous that it was useless trying to get an interview with the gentleman in charge, but pamphlet is attached.

[The pamphlet describes the high quality of the "Mountain Maid" Apples from Batlow, and offering cases of Apples for 12/6, delivered to customer's railway station.]

N.S.W. FRUITGROWERS.

Conference in Sydney, June 20-22.

THE FRUITGROWERS' FEDERATION of New South Wales will hold its annual conference in Sydney on June 20, 21 and 22. Six preliminary conferences have been held in the different districts which form the main Federation. The Central Coast Conference expressed approval of the Victorian Railways' scheme for the distribution of fruit and fruit drinks, and urged its adoption in New South Wales. At the Central Tablelands Conference, the opinion was expressed that the Municipal Fruit and Vegetable Markets were in an unsuitable position, and that it was imperative that immediate provision be made for better marketing facilities. It was recommended that the Government be asked to provide substantial aid to the cool storage industry. The necessity for the provision of refrigerated fruit trucks, and for the supply of more louvred trucks during the summer months was also emphasised. A protest was entered against any attempt to increase the agents' commission. The Northern District Conference recommended that the Standard Apple grade be amended to allow the inclusion of all blemished fruit.

Matters arising from the Irrigation Areas' Conference include a proposal that the General Conference be asked to request the Railways Commissioners to carry quarter bushel cases of fruit at a flat rate of sixpence to any station within the State. The better organisation of the City Markets under a Board or Commission was advocated, and the need for better ventilation in the markets emphasised. The further question of excise supervision was brought before the Southern District Conference.

At the Conference of the Metropolitan District, the complete prohibition of the importation of Citrus fruits was urged. It was pointed out that the Special grade for Citrus which allowed only 5 per cent. of the total number of fruit in any one case to carry any kind of blemish was far too severe, as it was in practice quite impossible to pack commercially to such a high standard. It was moved that the Special grade be amended to allow of all the fruit carry blemishes up to 5 per cent, of the superficial area of each individual fruit. It was further resolved that an effort be made to raise a fund for publicity purposes by a per case contribution from all fruit sold through the Sydnew Market, and that the Railways Commissioners be asked to put an "Eat More Fruit" advertisement at all main stations. The Association suggested that no further barrows be placed in the congested portions of the city, but as many as possible be placed in the suburbs, and also that the various councils be asked to open markets for the distribution of fruit and vegetables.

GENUINE
"Black Leaf 40"
IN
10lb. & 2lb. tins
DISTRIBUTORS
The PRODUCERS' DISTRIBUTING Society Limited.
SYDNEY and MELBOURNE

The foregoing items and others will be discussed at the big Sydney Conference on 20th June.

N.S.W. FRUITGROWERS.

Is Fumigation Satisfactory?

At a recent Board meeting of the Fruitgrowers' Federation of N.S.W., various matters of interest were dealt with. The question of sale of fruit by weight resulted in the conclusion being reached, that such a radical change in marketing conditions should not be decided hurriedly, and the subject was held over for further consideration.

Owing to the number of complaints that had been made by growers regarding the poor results from fumigation of Citrus, the Department of Agriculture will be asked to investigate the matter in order to discover the reason for the failure of fumigation as a pest destroyer.

Desired amendments to the marketing Act were discussed, and it was decided that the definition "fruit" be altered to allow of various sections of fruit being defined, such as "citrus," "pome," "stone," "vine," and "miscellaneous."

Reference was made to a report that American boats trading with Australia were loading sufficient fruit in America for the round trip. It was decided to call Government attention to the fact that these boats might purchase fruit at Sydney for the return trip to America, and also to ask that fruit brought into Australian waters from foreign parts be subject to quarantine restrictions.

The question of "Downy Mildew" provisions governing the export of Grapes to New Zealand, was dealt with on a report from the Leeton district, that the mile radius should be altered, and Grapes from any orchard free from "Downy Mildew," should be allowed to be exported to New Zealand. It was decided to send the Leeton report on to the Government.

The Association's organiser, Mr. G. H. Wilson, reported that eight organisations were affiliating in the West Maitland-Singleton Districts. It was reported that the total membership reported would be about 400 growers.

The question of the Federation's attitude in regard to whether the inclusion of the "North West" Apple case in the list of cases may be used in N.S.W., was again discussed, and it was decided to refer the question to the Annual General Conference in June.

N.S.W. FRUITGROWERS ORGANISE.

Between 60 and 70 fruitgrowers from the Yanco irrigation area met at Leeton, N.S.W., recently, and decided to reconsider the resolutions carried at a previous meeting, when it was suggested that there be a reorganising of fruitgrowers into one big Association with a paid Secretary.

It was finally decided to make a compulsory levy in order to finance the new organisation, as follows:—

Dried Fruits.—A levy of ½d. per cwt. on Currants and Sultanas; 1d. per cwt. on Apricots, Peaches, Prunes and Pears.

Fresh Fruit.—A levy of ½d. per case, ¼d. per half-case, 1d. per three-quarter case, and 1d. on bags of fruit.

Cannery.—A levy of half of one per cent. on canning fruit cheques.

The following officers were elected at the meeting:—President, G. Enticknap; Vice-Presidents, C. Newman and T. J. Herbert; Hon. Treasurer, W. Arbuckle. Secretary (pro tem), E. J. Polkinghorne.

REMODELLING SYDNEY MARKETS.

In order to do away with the congestion that exists, a comprehensive scheme for the re-modelling of the Sydney Municipal Markets has been prepared by Mr. Norman Weekes, architect-engineer for the City Commissioners.

Mr. Weekes recommends that the present site should be retained, and that additional centres should be established when necessary. He suggests the construction of second stories for stallholders, in order to increase accommodation, which would cost £15,000 to £45,000 for each floor. He recommended the removal of the Fish Market to a more favourable situation.

HAWKESBURY SHOW.

Citrus fruits were the outstanding classes in the fruit section at the annual exhibition of the Hawkesbury (N.S.W.) Agricultural Society. Mr. R. Lowe, of Lower Portland, secured first and second prizes for Washington navels, and similar awards for Emperor Mandarins.

Freeman's Reach branch of the Agricultural Bureau won the district competition; the Blacktown branch was runner-up. A non-competitive display by the Hawkesbury College attracted considerable attention. Dried, preserved, and crystallised fruits were included in the display.

The entries for the various sections constituted a record, every section showing an increase over previous years.

Victoria.

PLANTING GRAPE VINES.

Department's Warning.

The Assistant Minister of Agriculture for Victoria (Mr. Cain) draws the attention of those about to plant vines to the provisions of the Vegetation and Vine Diseases Act, concerning the removal of vines from Phylloxera districts into areas as yet clean. Those areas which were ruined by phylloxera some years ago were re-established at heavy expense. To guard against a similar fate in clean districts, the stringent precautions provided in the act should be carefully followed. Mr. J. M. Ward, Superintendent of Horticulture, declares that Phylloxera is still present, even in re-established vineyards, living in small numbers on the roots of resistant vines, to which it does no harm, or attacking so slowly that its presence may not be suspected. These vines are "carriers." An odd vine or so, planted carelessly in Swan Hill or Mildura, would lead to disastrous results.

In the State of Victoria, there are two areas known as "Vine Disease Districts." The Geelong district comprises part of the County of Grant, with an approximate radius of 15 miles from the town of Geelong. The North Central district comprises the whole of the Counties of Bendigo and Rodney: the greater part of the Counties of Noira and Gladstone and portions of the Counties of Bogong, Delatite, Anglesea, Dalhousie and Gunbower. The act states that any person removing vines or portions of vines from these districts or from any place outside Victoria so infested shall be liable to a penalty of not more than £100, or six months' imprisonment. Thus the introduction of vines has been prohibited unless by a permit from the Department of Agriculture, into the districts of Mildura, Swan Hill, Lilydale, Great Western, Tresco, and Koondrook.

The department issues a warning that these regulations are to be strictly enforced.

ATTENTION.

Attention is drawn to the Edgell spray pistol, as advertised in this issue by the Melbourne agent, Mr. T. W. Sands, 372 Lonsdale-street, Melbourne. Fruitgrowers who use this economical contrivance have nothing but praise for it.

CANNED FRUITS.

A Serious Position Has Developed : Unsound Economic Conditions : Crushing Sugar Burden : What is the Remedy ?

THE canned fruit industry is facing a serious position. That there are some facts to be frankly faced is evidenced by the investigation now being conducted by the Development and Migration Commission. Without anticipating their report, some outstanding factors are being forced into public prominence.

In the first place, there is much more fruit canned than is needed for Australian requirements, yet even with an export bounty of 1/6 per dozen tins of Peaches, there is still a heavy loss on export.

The pack in 1928 was 37,000,000 tins; Australian consumption is about 18,000,000 tins, leaving a balance of 19,000,000 for export, coupled with a carry-over of about 4,000,000 tins.

The grower is finding that the costs of production are steadily mounting, and the price of the fruit is reducing. The canneries are badly hit through increased costs of production and the losses that have to be faced on export.

The Governments, with over £100,000,000 involved in irrigation and closer settlement schemes, are necessarily vitally interested.

Some of the factors which are the cause of the present depression are as follows: —

(1) The adverse sugar position.

(2) Increased cost of production due to Federal arbitration awards.

(3) Increased cost of orchard requisites.

(4) Demand for high-grade fruit.

(5) Increased production.

Growers are urging that, as the bulk of the fruit for canning comes from areas financed by the Federal and State Governments, a definite policy of stabilisation is needed by guaranteeing sufficient bounty on export for five years. This would enable readjustments to be made in the industry. No more planting of canning fruits under Government auspices would be undertaken in the meantime.

The justification for Government assistance to rectify the present position is urged by settlers on the fruitgrowing areas opened out under Government auspices. Many blocks are quite unsuitable for economic fruit production, and the growers now realise that not only is there the lack of a profitable market for the fruit produced, but that even if the general position were favourable— which it is not—their individual blocks would never produce commercially satisfactory crops.

The adverse sugar position affects most seriously the growers who supply fruit to the canning and jam companies.

The following figures show the production of jam in Australia for the year 1912, as compared with the year 1925-26, and the per capita consumption for the same period:—

Year	Jam manufactured in Commonwealth,	Population.	Per Capita Consumption.
1912	85,800,000 lbs.	4,700,000	18 lbs.
1925-26	67,300,000 lbs.	6,100,000	11 lbs.

From these will be noted that since the year 1912 the production of jam has decreased by 18,000,000 lbs., whilst the population over the same period has increased by 1,500,000 people, and there has been a per capita consumption decrease of 7 lbs.

During the war a big export trade in jam was built up. This has been almost entirely lost, as proved by the following table:—

Fiscal Year.	Exports in lbs.	Decrease in export compared with year 1919-20, in lbs.
1919-20	44,000,000	—
1920-21	14,000,000	30,000,000
1926-27	2,300,000	41,000,000

From this table it will be noted the decrease in exports since 1919-20 equals 41 2-3 million lbs. The serious decrease in the production of jam means that fruitgrowers are unable to find a market for about 20 per cent. of their fruit, which simply becomes an economic waste, and to compen-

HAMBURG
(GERMANY).
Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

MARGETSON
& CO. LTD.
Fruit Importers & Salesmen
30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool
Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL
Head Office—Covent Garden Market, London, W.C.
Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand.
London, W.C.
Shipping Nos.
431 and 432

F. W. Vear
Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
MELBOURNE, VIC.
Highest Market Rates Assured
Prompt Settlements

sate for this loss, they are compelled to seek a higher price for the proportion that is sold for canning.

Not only was the duty on sugar raised from £6 to £9 per ton, but there is an embargo against importation.

The crushing weight of the sugar burden, amounting to approximately £520,000 per annum, is felt by the fruit industry, and the growers urge that the burden should be spread over the whole community.

In 1926 the Government allowed 250,000 tons of Australian sugar to be sold to oversea competitors at £11 per ton, f.o.b. Australian ports, or approximately £20 per ton under the price at which the jam manufacturers were buying their sugar.

For the years 1920-21, 1921-22, 1922-1923, the Government created a fruit pool, and in 1923-24 granted a bounty on domestic production of canned fruit with an additional bounty on export.

In 1924-25 the Government granted a subsidy on the export of canned fruit, and continued this form of assistance for the years 1925-26 and 1926-27. The satisfactory disposal of our surplus fruit is still presenting a very real difficulty.

What is the Solution?

The solution appears to be:—(a) An adjustment of the sugar position. (b) A continuation of the Government bounty system for the time being. (c) And a restriction on advances to place further settlers on orchard areas until an assured market is available for the processed fruit.

It is understood that the canning and jam industry has already intimated to the Government that **if the sugar position were adjusted the industry would stand on its own feet and take care of the export market without further Government assistance.**

VERY TALL.

One Farmer: "Out where I come from the squashes grow so big we have to haul them in with a team of horses."

Another One: "That's nothing. Out where I iive the Maize grows so fast that we have to keep two men at the base of each stalk to chop the ears off as they go by, and one day one of the fellows missed the ear and it caught under his belt. By heck, you won't believe it, but it carried him so far that we had to shoot dog biscuits up to him with a shotgun to keep him from starving."

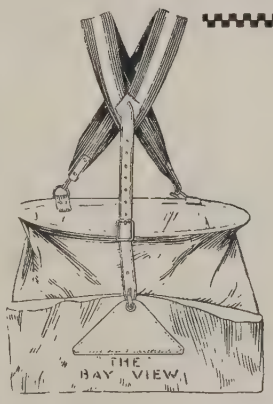
THE CHEMIST HELPS THE ORCHARDIST.

Fruitgrowers are finding that they have to rely more and more on the chemist to assist in making a success of their industry. Through the clearing of the land, it means that Nature's protection against insect pests, the birds, are no longer available to assist the fruitgrower, and, therefore, sprays and fumigating chemicals must be used to take their place. This is the reason why the large chemical manufacturing firm of A. Victor Leggo & Co. are producing a complete range of insecticides and fungicides to meet the need of orchardists.

So varied are orchard pests, that quite a number of different lines are manufactured to cope with them. Arsenate of lead, lime sulphur wash, benzole emulsion, red spraying oil, atomised sulphur, nicotine sulphate, dry Bordeaux mixture, dry Bordeaux, dry copper soda, weed killer, and calcium arsenate are all produced at the works of the firm at Yarraville (Vic.). To these has been added cyanogas as an agent for citrus fumigation.

Orchardists appreciate the enterprise of a firm that is doing much to assist the fruitgrowing industry, as it is only by the co-operation of the producer and the manufacturer that success in fruit production is possible.

An instructive booklet, "Sprays that Pay," has been prepared, and copies are available from A. Victor Leggo & Co.



"BayView" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

FRANK WALKER

Can offer all leading Export varieties of Apples worked on Seedling stocks, clean vigorous yearlings.

Our New Apple **LALLA** is available for 1928 Season.

Growers of Apples who have not seen this fruit are invited to ask for a sample Fruit Post Free, it stands alone at the top for quality.

PARTICULARS ON APPLICATION

110 BRISBANE STREET, LAUNCESTON, Tasmania.

Victoria

Fruit Crop Reports ∴ District News and Notes

Tresco District.—Mr. J. P. Greenwood, Manager of the Tresco Co-operative Fruitgrowers' Association, which handles all growers' products, including Citrus and Grapes, stated that 1,800 to 2,000 tons of Grapes, mainly Doradillos, had been harvested locally this season. This would go to the distillers in Melbourne, an advance being obtained by the Commonwealth Bank, Rural Credit Department.

Citrus trees and groves are generally looking better than for some time past, carrying an increased crop over last season, of good quality fruit—25,000 cases were expected, mainly Washington Navels; Valencia crop would be about 3,000 cases; Lemons, 1,200 cases. Price for Lemons was £14/10/- a ton, delivered to Spencer-street. Experiments were being continued on Mr. Sloane's property, by Mr. Read, soil specialist, Department of Agriculture.

"LALLA"
A NEW VARIETY OF
APPLE
An Improved "Red Delicious."
Excellent Utility Type,
Attractive Appearance.
Grown by
Frank Walker, Launceston, Tas.
A limited number of trees available, so place your order early, and avoid disappointment.
Supplies Obtainable from
OSCAR NOBELIUS
Kia Ora Nurseries,
NARRE WARREN, VIC.

Seepage was being overcome by concreting the main channels. The packing house, which was on Railway Department land, was working well. New plant was being installed this season.

Tresco grows a high quality Sultana, but owing to wet weather this season, the usual high color has not been maintained. Crops of 2½ tons per acre are grown.

Bamawm.—The Citrus crop this year was of excellent quality, but slightly lighter than last year. A co-operative company had been formed with the intention of erecting a packing house.

BERRY-GROWERS' CONFERENCE.

At the annual Conference of the United Berry-Growers' Association held at Silvan during May, the benefits of organisation were in evidence. Over thirty delegates attended. Mr. W. Jones presided.

In the annual report, favourable reference was made to the co-operation of the Wandin-Seville Diggers' Association, enabling the Association to keep up supplies and maintain prices. Satisfaction was expressed at the action of the Government in commencing investigations into the dreaded White Root disease.

Conference carried resolutions, protesting against the proposed increase of duty on arsenate of lead; requesting an extension in the term of service of Mr. C. C. Brittlebank, Government Biologist; that the Act relating to pure foods be strengthened in relation to fruit drinks.

The members specialise in the production of Strawberries, Passion Fruit, Loganberries, Raspberries, Gooseberries, and other of the berry fruit class. The 1927 season was fairly good, despite dry weather. The 1926 crop, however, was the lowest on record, owing to the thrip infestation. Prices for the 1927 season, exclusive of commission, were:—Strawberries and Raspberries, 9/6 a bucket of 12 lb.; Currants, 8/-; Blackberries, 7/-; Loganberries, 6/- to 7/-; Gooseberries, 4/6 to 5/-.

The United Berry Growers' Association is persevering with its system of direct supply to householders. Travellers secure orders in advance. The fruit is distributed through the Association's agents, who pay freight, and are allowed 2/3 a bucket of 12 lb. on all small fruit except Gooseberries, on which the commission is 1/6. It was decided in future to fix a date for the beginning of canvassing for orders, and that progress reports be furnished to branches on the number of orders booked. Mr. J. M. Mitchell, the Secretary, was congratulated on his services. To raise funds, it was decided that a levy of 2½ per cent. be paid on all Association fruit sold by the distributors last season, and 1 per cent. on supplies sent to factories.

VICTORIAN FRUITGROWERS' CONVENTION.

Burnley, June 19, 20, 21.

A conference of Victorian fruitgrowers, convened by the Victorian Fruit Council, will be held at the Burnley Gardens, commencing on Tuesday, June 19th.

There is a full agenda of items for consideration, including the reorganisation of the Association.

It is expected that the conference will be addressed by a member of the Development and Migration Commission; Mr. J. M. Ward, Superintendent of Horticulture, subject—1928 Apple Export Season; Mr. G. T. Levick, Assistant Entomologist, "Insect Pest Control"; Mr. R. E. Boardman, "Fruitgrowing and Marketing in U.S.A. and England"; Prof. S. Wadham (Melbourne University), "Some Aspects of Co-operation"; Mr. H. G. Colombie, "Export and Sale of Fruit Overseas"; Mr. F. M. Read, M.Ag.Sc., "Soil Management."

Advertiser
Commencing business, catering solely for the requirements of fruitgrowers, desires to communicate direct with Manufacturers or Importers of such lines.
Reply, giving particulars of goods handled, to
"WOFRAG"
c/o "Fruit World,"
Bank House, Bank Place,
MELBOURNE.

COOL STORES' ASSOCIATION.

At the quarterly meeting of the Fruitgrowers' Cool Stores Association of Victoria, held on May 8. It was decided to thank the Orient Co. and the Royal Agricultural Society for the inclusion of the competition in export fruit in this year's Show schedule. Mr. T. E. Butler prepared some interesting figures on the running costs of electric power, based on actual working experience. This question will be discussed at the Harcourt Conference.

COOL STORE CONFERENCE.

Harcourt, Victoria, August 16.

The Tenth Annual Conference of the Fruitgrowers' Cool Stores Association of Victoria will be held at Harcourt on August 16 and 17 next.

FIGHTING INSECT PESTS IN THE ORCHARD.

Case Moths of Orange.

Case moths have been more plentiful this season than for years past. These remarkable stick-case making insects often cause much damage to the young growths of Orange and Lemon trees. Spray with arsenate of lead.

Orange Butterfly.

Keep a sharp lookout for the yellow and black caterpillars of this moth. They have been common in the north-eastern districts during the last few weeks. Young shoots of Orange and Lemon trees constitute their favorite food. Spray same as for case moths of Orange.

Painted Apple Moth.

Owing to the abnormal season, the hairy tufted caterpillars of these very destructive moths are still present in fair numbers on Apple and other fruit trees. Keep a sharp lookout for them, as they are particularly destructive to the fruit spurs. They are easily controlled by arsenical sprays.

Bryobia Mite and Red Spider.

After pruning Apple and other fruit trees, spray with red oil. All prunings should be burnt. Remove all loose bark before spraying. Old bandages should also be removed. Props that have been used for supporting the branches should be dipped in boiling water to destroy eggs of these mites.

For further notes, see "The Fruit World," April 1, 1928, p. xvii.

Pear-leaf Blister Mite (Phytoptus).

All fallen Pear tree leaves that had been attacked by these mites should be gathered up and burnt.

Woolly Aphis.

When Apple trees are free of leaves, use the nicotine sulphate and red oil spray. This is made up as follows:—

Nicotine sulphate, 1 pint;
Red oil, 1 gallon.

To prepare sufficient mixture to treat 100 trees, 1 lb. soap should be boiled in a gallon of water till dissolved; add 1 gallon of red oil, and mix thoroughly; then add 1 pint of nicotine sulphate, and after mixing the whole for a few minutes, add 80 gallons water. If the water is hard, a small piece of washing soda should be added.

The whole tree should be treated, and the spray applied with sufficient force to reach insects in crevices. After the winter the woolly aphis parasite (Aphelinus), should be liberated in orchards infested with woolly aphis.

Black Aphis of Orange and Lemon.

At the present time these small destructive aphids are to be seen thickly clustered on the young growths of Citrus trees. When noticed, the trees should at once be sprayed with nicotine sulphate or black-leaf 40.

Looper Caterpillars.

The small brown looper caterpillars are still to be found in orchards. These caterpillars do considerable damage to the young fruit spurs of the Apple and other trees. When caterpillars are noticed it is advisable to spray at once with arsenate of lead.

Scale Insects.
San Jose, Red, Olive, Apple Mussel, Etc.

Spray in early winter with red oil. Burn all prunings. For summer treatment, use lime sulphur.

Codlin Moth.

The fruit season is about finished. Growers should pick up and destroy all fallen Apples, scrape loose bark from trees, remove hessian bands and destroy larvae underneath, spray the crevices in sheds to destroy larvae hiding behind or in the cracks of the boards. All fruit cases that have contained fruit, should be dipped in boiling water.

Light-brown Apple Moth.

Owing to the abnormal season, the caterpillars of this moth are still present in orchards on Yates' Apples. Spray with arsenate of lead.

We Look Ahead

SULPHATE OF AMMONIA was never more popular than it is to-day. In 1926 we said that the 1927 consumption of Sulphate of Ammonia would establish a record. We were more than right, for the tonnage sold in Australia was far ahead of our most sanguine expectations.

We look for another record during 1928.

The gratifying part of it is that all the virtues we have claimed for Sulphate of Ammonia have been proved in actual usage, for after all the present popularity of Sulphate of Ammonia is directly traceable to only one influence—RESULTS.

There's real commercial value in every pound of Sulphate of Ammonia used.

Ask about the improved Sulphate of Ammonia now being produced—dry, free of lumps, and runs easily.

THE METROPOLITAN GAS COMPANY,
196 Flinders Street, Melbourne.
Phone: Central 8162.

SA 3/28

ALL MEN ARE LIARS.

He: "Would you marry a man who lied to you?"

She: "You don't think I want to be an old maid, do you?"

NOTES IN BRIEF.

RECORD APPLE SHIPMENT FROM SOUTH AUSTRALIA.

The "Port Campbell" left Adelaide on April 6, with 90,000 cases of Apples for England. This is the largest shipment of Apples from Adelaide this season.

CANADIAN APPLES.

Canada had, up till March 28th, sent 630,849 barrels and 567,198 cases of Apples to England. This is considerably less than had been sent during the same period last year.

GERMANY BUYS APRICOT KERNELS.

There is a market for Apricot kernels at the present time in Germany, prices ranging from 52/- to 95/- per cwt. The kernels must be white inside, and sweet kernels must be separated from bitter kinds, although both have a market.

The sweet kernels bring the best prices, and Chinese and Indian sweet kernels recently brought 95/- per cwt. delivered C.I.F. Hamburg. Kernels that have been stewed by canneries cannot be sold.

HARCOURT RECORD SHIPMENT.

188,622 cases of Apples and Pears from the orchards of Harcourt (Vic.), were shipped overseas this season. The previous hightest total exported from this district was 89,324 cases in 1925-6.

A NEW PROCESS FOR KEEPING FRUIT.

A new preparation, perfected by a German-American named Fritz Brahm, is said to keep Oranges and other fruits indefinitely, without refrigeration. The preparation is said to be composed mainly of wood-pulp and celluloid, and is applied by dipping the fruit into a vat containing the mixture.

The inventor recently exhibited Grape Fruit treated by the new process, at Washington, U.S.A. He has secured sound financial backing for exploiting the venture.

SHIPMENTS FROM SOUTH AFRICA.

During the month of February, 633,369 cases of deciduous fruits were shipped to England and the Continent from South Africa.

A small trial shipment of Oranges and Pineapples was sent to the London market, and found a ready sale. The Oranges and Pines were from the Kenya Colony, and there is a possibility of a big trade with these fruits in England, particularly with Oranges, which are large seedless Jaffa type of excellent quality.

DATES IN WINE.

There are more ways than one in dodging the prohibition laws of U.S.A. A cute Californian fruit packer obtained a permit to pack dates in wine. The sale for his product has grown so heavy that he is unable to keep up with the demand.

CROPS FAIL IN SOUTH AFRICA.

The fruitgrowers of South Africa have not been experiencing too good a time of late years. The 1928 crop of Prunes failed to develop properly and there was a heavy fall of fruit from the trees. Growers ascribe this to a cumulative deficiency of moisture in the ground. General reports on the fruit position in South Africa, show that there is a shortage of nearly every variety of fruit.

WATCH YOUR PACKING.

At a general conference of interested parties, convened by the N.S.W. Minister of Agriculture (Mr. Thornby), resolutions of a Federal nature were carried, among which was one "stressing the necessity for fruitgrowers to be most particular in picking, grading, packing, and general get-up of their fruit, with a view to attaining wider distribution, and to prevent further congestion on the markets."

Fruit agents at the Conference were emphatic that no gluts occurred with choice fruits attractively packed. Congestion was caused by growers sending in fruit of poor quality, indifferently packed.

Spraying with fungicides to check diseases in Tomatoes and Potatoes is now compulsory in Queensland.

Bud selection for citrus from proved bearing trees is being actively practised in N.S.W. and Queensland.

Experiment stations for Banana culture are being established in the North and South of Queensland.

FOR

SPRAYING, LIMEWASHING and DISINFECTING

RELIABLE AND EFFICIENT MACHINES ARE ESSENTIAL

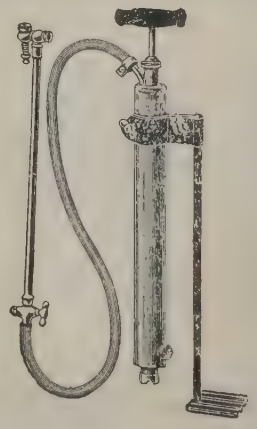
Before Placing Your Order ASK A FRIEND

WHO HAS USED A

VERMOREL "ECLAIR" SPRAYER

TO TELL YOU HIS OPINION OF IT

ACTUAL USE IS THE BEST TEST



The types made include the following:—

HAND SPRAYERS
PNEUMATIC HAND SPRAYERS
KNAPSACK SPRAYERS
PNEUMATIC KNAPSACK SPRAYERS
BUCKET PUMPS
BUCKET SPRAYERS
SINGLE WHEELED SPRAYERS
TWO WHEELED HAND POWER SPRAYER
high pressure model (220 lbs. per square inch)
CART SPRAYERS
AUTOMATIC HORSE DRAWN SPRAYERS
POWDER BELLOWS
KNAPSACK POWDER SPRAYERS
AUTOMATIC HORSE DRAWN POWDER SPRAYERS
3 H.P. MOTOR SPRAY OUTFITS

LIQUID CAPACITIES 1½ pints to 88 gallons. PRICES FROM 2/9 to £80 each

The above types include machines for Spraying Trees, Bushes, Ground Crops, and for applying Limewash, Whitewash, Distemper, Waterpaint and Disinfectants.

Ask your local Merchant for full particulars, or write for catalogue and leaflets to:—

COOPER, PEGLER & CO. LTD., 24d CHRISTOPHER STREET, LONDON, E.C.2.

FREE FRUIT FOR SCHOOLS.

A Kindly Action.

Dr. Arthur, N.S.W. Minister for Health, recently gave a practical demonstration of common-sense philanthropy. Apples being plentiful, he purchased a ton and a half of the fruit, and had it distributed among the schools in congested city areas. When a well-known Sydney business man heard of the scheme, he insisted that he be allowed to share the cost with Dr. Arthur.

The Minister hopes that, following his lead, it may be possible to have regular distributions of fruit through the city schools.

MURRUMBIDGEE RICE CROP.

The Murrumbidgee rice growers complain that they have not gained from the tariff. Two years ago they received £10/10/- a ton on rail, but a duty of £3/14/- has been imposed. This season's crop is estimated at 16,000 tons, of which total 8,000 tons have been purchased by the Associated millers at £11 a ton, with an option over most of the remainder at the same rate. Last year the price was £12 a ton.

New Zealand Apples for South America.—It is feared that the shipment of New Zealand fruit to South America may be curtailed (states the "Imperial Food Journal"). The Uruguayan Government has imposed what amounts to a prohibitive duty on imported Apples, being equal to 16/- a bushel, and equivalent to the c.i.f. value of New Zealand fruit. Again, in the Brazilian market the United States have a tariff preference equal to 3/6 a case over New Zealand Apples. Still, Argentina, which is the largest market in South America for New Zealand Apples, admits such fruit duty free.

COMMONWEALTH TAXATION.

Concessions for Producers.

Fruitgrowers will welcome the statement issued by the Australian Country Party with respect to taxation concessions which they are entitled to claim as a result of recent action by the Taxation Department.

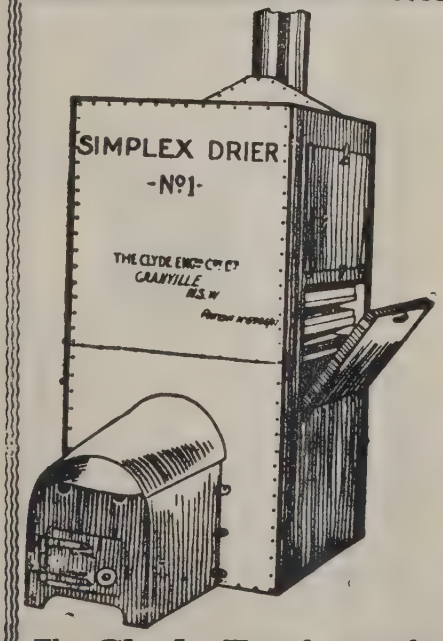
The man on the land can deduct expenditure for eradication and extermination of vegetable and animal pests, destruction of timber, expenditure in preparing land for agriculture, ploughing and grassing land for grazing, and draining swampy land. He can also obtain concessions on structural improvements, and wear and tear of fences. Claims for concessions in respect to expenditure incurred in the year ended June 30, 1927, may now be made by lodging amended income tax returns.

SPAIN'S GRAPE EXPORTS.

The final statistics of the Department of Agriculture (Spain) show the following exports of Spanish Almeria Grapes during 1927:——One million three hundred and forty-three barrels (46 pounds each), 9,800 half-barrels and 326 cases. Practically all exports were to Liverpool and London, England, and Hamburg, Germany.

Stanthorpe (Queensland) provided high quality Jonathans and other Apples this season.

Fruitgrowing must depend for its stability and extension on suitable lands, planted with the right varieties. Our Queensland correspondent states that poorer lands must inevitably go out of cultivation, and the sooner this is realised the better.



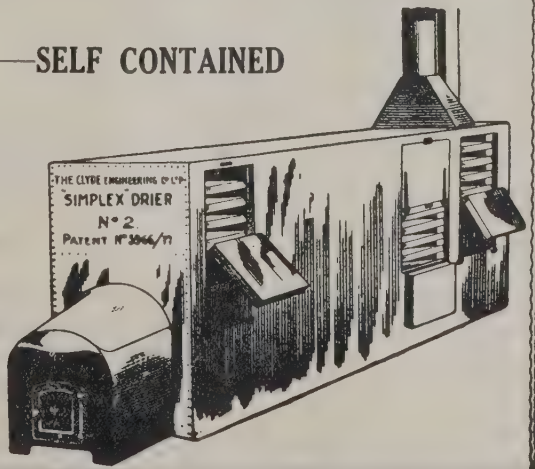
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ld.
GRANVILLE, N.S.W.

THE ORCHARD SPRAYING OUTFIT.

Efficient Equipment Necessary.

Some Practical Hints.

THE SPRAY PUMP is now an essential part of the equipment of the successful orchardist. With the increased activity of diseases and pests among commercial fruits the application of fungicides and insecticides early in the growing period is necessary. The orchardist, however, can be hampered in effecting satisfactory control measures if his machine is inefficient or unsuited to the area.

Among the essential points to be considered in the choice of a spray pump, states Mr. P. H. Thomas, State Fruit Expert, Tasmania, are the following:—

1. An efficient and economic engine of sufficient power to deliver the spray at the rate required.
2. A strong and well-balanced carriage, with broad wheels that will allow for convenient operation.
3. A pump in which the valves, compression chamber and plungers are readily accessible.
4. A good vat, preferably constructed of wood, that can be easily emptied or cleaned, and fitted with a good agitator.

When procuring a machine the type and capacity should be decided by the orchard to be treated, and to a certain extent by the diseases and pests which have to be combated.

In assessing the costs of production there is one item that stands out above all others, viz.: Labor. Implements and apparatus must be of a type that will allow the different operations to be carried out quickly and efficiently, at the proper periods.

The latter is most important in order to secure an effectual control of the different insects and fungus pests commonly experienced in this State, a week's delay often making the difference between success and failure.

The orchardist who is content to employ a machine which is slow, and of insufficient capacity to treat the area at the required period, or that involves the use of extra or unnecessary labor will always be severely handicapped, especially in adverse seasons.

Having determined the capacity of the machine needed, a selection may be made amongst the various types of outfit on the market. During recent years the manufacturers have given considerable attention to the improvement of orchard pumps, and to-day the orchardist is in the position to choose from a number of highly efficient machines.

Orchard spray pumps may be divided into three classes, viz.:—(1) The single action barrel pump; (2) the double action pump, which is fitted to a larger vat; (3) the motor driven pump. The former two are driven by hand power, although a machine after the type of class 2 is on the market, in which the power is supplied from an eccentric cog fitted to the axle of the carriage.

The barrel pump is chiefly used in small areas of orchards of one or two acres, and is a convenient outfit for the farm orchard, or areas that are principally designed to provide fruit for home consumption. This type of machine is also suitable for young orchards. Such areas are principally attacked by pests which do not invovle the application of sprays within a short period, as during the younger stages they are not generally allowed to bear fruit.

An efficient barrel pump will deliver the spray material at approximately 60 gallons per hour, and allow the operation of one medium sized nozzle at about 100-130 lb. pressure. The double action hand power machines are designed principally to facilitate the operation of this type of outfit. These generally are fitted with two cylinders, and will deliver the spray material at about 100 gallons per hour at a pressure of approximately 175 lbs. This will enable two nozzles to be operated satisfactorily, and is the type of machine in general use in bearing orchards, where a petrol-driven outfit is not employed.

There is now a wide range of petrol driven spray pumps. The principal features to be considered are accessibility of working parts, sufficient power to operate according to requirements, and convenient and easy haulage. The latter phase is most important, the ideal machine being one that is designed to have the weight distributed when the vat is filled with spray material, so as to give an even balance for haulage.

The motor spray pumps that are generally favored in Tasmania range from 1½ to 5 horse power. The former class will discharge the spray material at about 200 gallons per hour, whilst the higher powered types can reach as much as 600 gallons per hour. Either of these machines will carry two nozzles, the higher-powered outfits being necessary in order to effectually operate the "gun" type nozzle.

In the older type machine different nozzles were supplied for different purposes; in some cases means of adjustment were provided by different sized discs, or a cock fitted so that the flow could be regulated, and reduce the aperture from which the spray is forced. These have now been generally superseded by a type which is known as a "spray gun." There is no doubt that the "gun" has considerably simplified the practise of spray application. The chief features are that the pressure is retained until the liquid leaves the "nozzle." The jet is controlled by a lever, which by a simple half-turn will give the operator command of a driving spray that will reach to the top of the highest trees or throw a fine mist a few feet in front of the nozzle.

In some instance growers have tried to instal a "gun" upon a pump that has insufficient pressure. In order to obtain satisfactory results it is necessary that at least 200 lb. pressure be developed; anything below this will be inclined to waste the material and give inefficient operation.

Another important factor is to see that the spray is delivered through hose and piping that are of uniform calibre. Unless this is carried out a good deal of pressure may be lost in the application of the sprays, or bursts may occur in the piping or connections.

The "spray gun" delivers the material at a very high rate, and it is unnecessary to apply the methods of application that have been practiced with the disc nozzle. Instead of running up and down the main limbs, the operator must cover the tree by directing the spray from the opposite angles. This involves a quickness of application above that necessary with the ordinary disc nozzle, and no time must be lost in getting from tree to tree whilst the spray material is being discharged from the pump.

POWER SPRAYERS.

Some Victorian Comments.

Although on very small holdings the method of spraying by hand could hardly be superseded, on orchards and vineyards of 10 acres of more it is more economical to use a power spraying outfit. The power outfit will do superior work to that of the hand pump because of its greater and more even pressure, and the better agitation of the spray mixture.

To operate a manual pump with two leads of hose three men are required, and at best only a poor pressure can be maintained; but with a power outfit two men can operate the hose leads, and the third man is liberated. This is a great saving, because the running and upkeep cost of a small petrol engine is infinitesimal when compared with the wages of the man displaced. Moreover, a greater amount of work can be done with the power outfit on account of the high and regular pressure exerted.

Another factor that must not be lost sight of is that the proper spraying period for most insect and fungoid pests is of very limited duration, and is often still further shortened by unfavorable weather. The power outfit then, by reason of its quicker and better work, often prevents considerable losses.

TREES

THAT BEAR TOP PRICE FRUIT

It pays always to plant quality trees. Especially is this proved in "glut" seasons, when the market is hopelessly cluttered with all grades of fruit. At these times the best—and the best only—command good prices. With others, the whole year's work and expense are sacrificed.

Therefore, see that the finest trees—

GOODMAN'S FRUIT TREES

are planted in your orchard. All our stock is sturdy—the result of many years' experience in cultivating strong, healthy trees, and will give excellent yields under all conditions.

Absolutely true to label, our varieties include all the choicest and all well-known fruits.

Details of all lines are given fully in our

Send for your copy—FREE!

Hundreds of growers have obtained much useful information from our guide—and the 1928 issue is better than ever before. Write now.

C. J. GOODMAN

PICNIC POINT NURSERIES

BAIRNSDALE, Vic.

P. O. BOX 47

(W McF.)

"REGULATORY ACTS OF U.S. DEPARTMENT OF AGRICULTURE."

(By Elmer G. Pauly, American Trade Commissioner, Melbourne.)

AS American Trade Commissioner, the writer is, from time to time, called upon to give information concerning the various regulatory acts, particularly affecting agricultural products, which under the law, the United States Department of Agriculture must put into effect as the occasion arises. In many foreign countries these acts are often regarded as attempts by the American Government to bar the importation of competing products. By those individuals in foreign countries thoroughly familiar with such matters, our position is clearly understood, and usually appreciated; but for the benefit of those not familiar with the subject, it might be well to state definitely that the policy of the United States Department of Agriculture in this connection is well established and based on law. Moreover, the greatest care is exercised in investigating cases and giving them the finest scientific and practical thought before action of any kind is taken.

It should be borne in mind that not only the United States Government, but the various State Governments of the United States enforce regulations within the United States, similar to those which are enforced against foreign countries. The outbreak of any serious infectious animal or plant diseases results in the immediate quarantine of areas and restrictions or an embargo on the movement of products from one State within the United States to another. In fact, it can be safely stated that no regulation is enforced against a foreign country that is not also enforced against any State or section of the United States where a similar condition exists. This latter point does not seem to be generally known in many foreign countries.

The principal branches of the Department of Agriculture having charge of the promulgation and enforcement of various regulatory acts affecting the importation of farm products are as follows:—

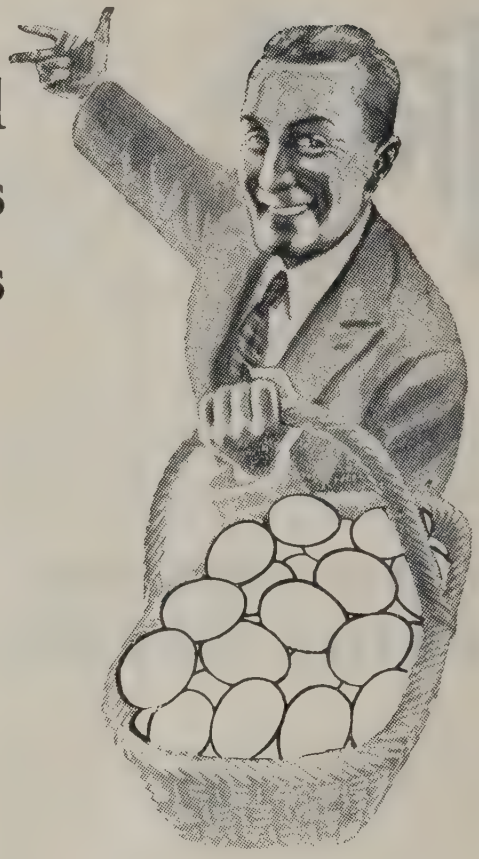
The Federal Horticultural Board.—This Board, under authority contained in the Plant Quarantine Act, is charged with the prevention of the entry of injurious insects and plant diseases with plants and plant products from foreign countries, and the prevention of the spread within the United States of injurious insects and plant diseases which may have gained a local foothold to non-infested areas, and further, to co-operate with the States in measures looking toward the extermination of such pests.

The Bureau of Animal Industry.—This Bureau is charged with preventing the introduction of dangerous animal diseases. It maintains a standing embargo against domestic ruminants and swine originating in any country where such dangerous diseases as foot-and-mouth disease, rinderpest, etc., exist, and its embargoes against these classes of livestock automatically go into effect whenever outbreaks of such diseases occur in a foreign country. It also prescribes inspection, disinfection or other restrictive requirements for animal by-products, feeding materials, etc., from these infected countries.

The Food, Drug and Insecticide Administration.—This administration prohibits the introduction into interstate commerce within the United States, and the importation into or exportation from the United States of adulterated or misbranded foods or drugs; and also prohibits the importation of any food or drug which is dangerous to the health of the people of the United States, or is of a kind forbidden entry into or forbidden to be sold, or restricted in sale in the country in which it is made or from which it is exported. It has power to make all regulations necessary in these matters.

If, at any time, the occasion arises where information is desired concerning specific agricultural regulations in force in the United States, the offices of the American Trade Commissioner will always gladly and promptly furnish the necessary details.

Have always had a supply of eggs for the last 2 years



MOST people who keep fowls do so in order to have a supply of eggs. Some "backyarders" would call it a hobby, but, it soon becomes a disappointing one if week after week, month after month, their fowls simply gobble up food and give nothing in return. Now, "keeping fowls" can be a hobby and a source of real utilitarian value as well if owners will follow the "Karswood" system of feeding for eggs. The "Karswood" way makes the hobby of keeping fowls profitable from the very start. It is so simple and economical that the veriest beginner cannot fail to make a success of poultry-keeping. Just read the letter quoted below and see how the writer, while keeping fowls as a hobby, yet always had a supply of eggs for the last two years as a result of feeding with "Karswood" Poultry Spice:—

Will not be without Karswood while I keep fowls

"As a hobby I have always kept seven or eight fowls, and have been using the Karswood Spice for quite two years or more, and have had splendid results. I cannot speak too highly of it as a benefit to the fowls in keeping them healthy, also an egg-producer, always having a supply of eggs, besides preserving some. I never buy any eggs all the year round. The hens only missed laying for eleven consecutive days during the whole twelve months, which I think was very good. I will not be without the Karswood Spice while I keep fowls. You may use this note at any time if it will help your advertising but do not put my name unless asked for. Wishing your company every success, and I will speak for your Spice at all times.

(Mrs.) N.P.

Wonderful results

Yet another enthusiast writes to say she has had wonderful results from feeding her birds with Karswood. Here are her own words:—

I have had wonderful results from feeding with Karswood. The chicks look 4 or 5 months old instead of 2. The mothers which reared them were laying when the chicks were five weeks old. I have also 2 Black Orpington pullets hatched on 1st June and were laying at 4½ months and have been laying well since. Thanks to Karswood I am not without any eggs at any time of the year. I have got a neighbour who has some fowls and she can't make out why I am always supplied with eggs when she has not any, but I say it is nothing but "Karswood" to make them lay.

You can use this letter as you think fit. I can't say any more about "Karswood" other than it is absolutely wonderful spice. I recommend it to anybody who has fowls.

(Sgd.) Mrs. E. Lawrence,
Summerhill Road, Camberwell, Vic.

Note the Economy

1/- packet supples 20 hens for 16 days.
2/- packet supplies 20 hens for 32 days.
13/- (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable at all wholesalers and stores at the following retail prices:—

½ lb. packet	Price	1/-
1 lb. packet	,,	2/-
7 lb. tin	,,	13/-
14 lb. tin	,,	25/-
28 lb. tin	,,	48/-

Poultry and Beekeeping

POULTRY.

The Breeding Pens.

THE season has now arrived when the breeding-pens should be mated up. This is one of the most important phases in the poultry-keeper's year.

It is, indeed, a time when his judgment is put to a severe test, if the good qualities of his stock are to be improved or maintained. Remember that the first essential is to have pure-bred stock to select from.

It cannot be expected that a bird bred from a weak parent will have the stamina to withstand the great strain on the body which egg-laying entails, so see that your stock is constitutionally strong.

Profitable Production.

Profitable production implies profitable stock, and the securing of this rests chiefly on the class of stock mated.

Many poultry-keepers make the common mistake of using eggs for hatching purposes from the whole of the flock, whether the birds be good, bad, or indifferent. Such a practice soon leads to the deterioration of a flock, however well-bred they may be.

Just as the dairyman selects cows for breeding in order to increase the supply of butter-fat, so the poultry-keeper must select the good layers. It is far better to have 100 pullets bred from selected stock, than double the number from indifferent stock.

Good Points.

As a guide to the novice, the following points may be mentioned as indicative of strong constitutional vigour in both sexes:—A clean face, free from wrinkles and feathers. Prominent bright eyes. A short, stout beak. Legs set wide apart. A short shank. Tight feathering, and a well-developed crop. Hand in hand with these points should go signs of suggestive laying power, such as:—A long deep body, well-developed abdomen, soft to the touch. The back should be broad, while generally the bird should present an alert, business-like appearance.

Birds to Avoid.

Birds with coarse heads, long, thin beaks, heavy feathered eyebrows, dull sunken eyes, wrinkled skin surrounding the eyes, usually indicate poor egg-capacity and low vitality.

Proper Feeding.

The proper feeding of breeding birds is all important, if success is to be assured in the hatching and rearing of progeny. They should be put on a special diet. This should be plain. Rich foods, such as meat, milk, etc., should be sparingly provided. The best plan is to supply at all times a mixture of grains—wheat, maize, oats, etc. In fact, the greater variety of grains fed, the stronger will be the hatching qualities of the eggs, and the easier will the chicks be to rear. The food should be placed in deep litter to induce exercise. This is essential if the birds are to be maintained in proper breeding condition.

Small Flocks.

Chickens raised in large flocks never thrive so well as those raised in smaller flocks. The fewer together, the better the results. They should have enough heat, so that they will be comfortable without huddling. The brooder must be so constructed that the chicks can put their heads into the fresh air, and still keep warm. The brooder should be in an open front pen, which allows the sunlight to warm it up first thing in the morning. Sunlight, fresh air, and a comfortable cover to rest under when they feel so disposed, will make for the ideal conditions that chicks thrive upon.

Orchardists are beginning to realise that poultry-keeping as a side-line is very profitable. Not only are the eggs profitable, but healthier trees result from the continual working of the soil by the birds in their constant search for insects and grubs.

One orchardist in the Rochester district of Northern Victoria, who started with a very small flock of birds in the orchard, found poultry-raising so profitable that he now pays more attention to this side of his business than he does to the fruit. He now runs about 1,000 head, mostly White Leghorns.

Many fruitgrowers in the Rochester area who are taking up poultry owe much to the efforts of Mr. John Roy, officer in charge of the State Rivers and Water Supply at Rochester. For many years he has urged growers to keep poultry as a side-line, and many orchardists visit the pens kept by Mr. Roy in order to study the methods adopted by him.

Tuberculosis in Poultry.

The danger of tuberculosis in poultry transmitting the disease from flock to flock, and from poultry to swine, is causing a lively interest in U.S.A. Many States have adopted a working plan for the control and eradication of the disease, and much has been done by tuberculin tests, chiefly with a view to determining the value of the tests in a clean-up campaign.

STANDARD FOR EGGS.

At the Annual Conference of the National Utility Poultry Breeders' Association, which took place at Castlemaine (Vic.), recently, the State President (Mr. P. N. Tilley), stated that the value of the industry to Victoria was £4,500,000, and £12,000,000 to Australia, and when the next census was taken, the public would be astounded at the enormous progress the industry had made.

It was decided at the conference to draw up a standard of eggs for show, two ounces to be the minimum weight and 2¼ ounces to be the standard.

It was also decided to ask the Commonwealth Government to pass legislation prohibiting the export of eggs weighing less than 1⅞ oz.

A motion that all eggs be sold by weight, was referred to the Council for consideration.

BEEKEEPING.

Winter Inspection.

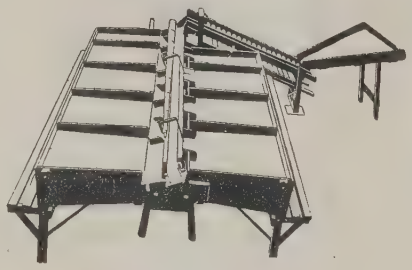
THE MANAGEMENT of the apiary at this period of the year, consists chiefly in making an occasional round among the bees to see whether anything has gone wrong with them. On no account should they be unnecessarily meddled with.

Where any doubt exists as to the stores required for wintering, it may be necessary to open the hives. However, it is a far better practice to try and estimate the quantity of stores on hand, by lifting the back of the hives.

"To Choose the best is Wisdom"

CITRUS GROWERS

A CLEAN, UNBLEMISHED PACK sized ACCURATELY are the essentials of MODERN MARKETING.



Model 10 with Elevator Conveyor attached. Spring Floor Bins on each side of the machine. Each bin will hold up to 3 bushel cases of fruit.

To do this at a MINIMUM of EXPENSE necessitates the use of recommended FRUIT SIZERS.

The "Lightning" Fruit Grader Co. is devoted entirely to the manufacture of facilities for the Fruit Industry. Practical experience over a long period of years has enabled us to make available many models of Fruit Sizers from which success is assured.

THERE ARE NO OTHER SIZERS SO EX TENSIVELY USED.

Catalogue on Request.

We also manufacture complete Citrus Packing House Equipment, and are Australasian Distributors of Ethylene Gas.

THE "LIGHTNING" FRUIT GRADER CO.

5 Hoddle Street, Collingwood, N.9, Melbourne

Cable, Telegraphic Address, "LIGHTNING," Melbourne VICTORIA

Experienced beekeepers can in this way gauge by weight the stores present. Inexperienced beekeepers will, of course, have to examine the combs.

If it is necessary to do so, choose a fine day, and in any manipulation that follows, on no account break up the cluster of bees. After examination, close up the colony as soon as possible in order to conserve the heat.

At this season of the year, bees will not take syrup readily. If combs of honey are on hand and feeding is carried out, place the combs on the outside of the cluster. To place them in the centre of the cluster would be the means of dividing it, and will probably bring about the death of the bees.

Mats and Covers.

After heavy rain, examine the mats over the frames. Replace damp mats with dry ones. Keep a supply of mats on hand. Gently lift one end of the mat to discover its condition. This should be done without disturbing the bees. No better covering can be had than sheet lead. This may be costly, but they are rainproof, and do not require to be secured in windy locations. If lead is too expensive, use zinc or ruberoid. If ruberoid is used, it should be heated before being fixed to the roofs.

Removing Spare Top Boxes.

All the top boxes that have not yet been removed should now be taken off and the bees confined to the brood-chambers. Breeding will commence shortly in colonies of normal strength in the warmer districts, and hives should be snug with well-fitting mats to conserve the heat of the hives. If it is found that the bees have taken to a top box entirely, remove the lower one, and put the top box in its place.

Beekeepers Confer.

At a conference of interstate representatives of the various beekeepers' association, a resolution was passed creating an Australian Honey Council, to consist of two representatives of each State. A provisional committee was appointed to act until the council was constituted.

This action was taken following discussion on the necessity for co-ordinating the efforts of the States in ensuring the maintenance of supplies of honey for London, and the necessity for adequate publicity funds.

A resolution was passed, recommending to the Apiarists' Associations that £50 per month, from May to September, be contributed by associations in each State, for the purpose of advertising.

Mr. McDonald, who visited England on behalf of the Association, told the Conference that a prejudice existed in London towards Australian honey owing to it having a eucalyptus flavour. After consultation in London with overseas and Australian officers, a factory had been established at Mitcham (Vic.), to which honey produced in the Commonwealth was despatched and blended to a common standard. The blended article now had a secure sale on the British markets.

EAT MORE HONEY.

A letter of appreciation has been received by the Victorian Railways' Commissioners from an apiarist at Kangaroo Flat, who attributes the increased sale of his honey to the publicity given to the product of the bee by the Railways Department.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE." 499 LITTLE COLLINS ST. MELBOURNE.

(By "Syringa.")

Keep Sowing Peas and Beans.

SOW ANOTHER principal crop of early Peas, to succeed those sown last month. The ground, to do justice to the future crop, should be well and deeply dug, at least a good spade depth, and where one or two crops of the same, or other kinds of vegetables, have been taken from this ground, it will now require manure, which should be carefully drawn to the bottom of the trench, and equally covered, leaving the surface smooth and even.

If the weather be moist, and you are anxious to get in the seed, the most desirable plan would be to sow the crop as you proceed in the operation of digging: this will prevent the necessity of treading on the ground, which is always as much as possible to be avoided, not only in this, but in every other instance.

Another, and a larger, crop of Broad Beans may now be sown, as a succeeding crop, the best sorts to be sown now being Leviathan Long Pod, Broad Windsor, and Cole's Dwarf Prolific.

These should be planted in rows, two feet apart, and allowing three inches distance in the rows, dropping them in the holes triangularly, an inch and a half deep.

If you neglected sowing Beans last month, you should take advantage of the first two weeks in this for getting in a crop.

Cabbage and Cauliflower Plants.

During this month, make further plantings of Cabbages and Cauliflowers. The Cauliflowers will, however, require to be planted in ground which is richly manured, or a dressing of that article must be given, before planting out the present crop. These will require to be planted in rows two feet apart, and the plants eighteen inches asunder in the rows.

Carrots.

A crop of the Early Horn variety may be sown, but see that the ground is fine, deep, and well dug.

Trench and Manure Vacant Patches of Ground.

Out of all the twelve months you could not select a better than that of June for trenching and manuring all unoccupied portions of ground.

Trenching is not only of the greatest importance in improving and fertilising the soil, but is also attended with this advantage, namely, killing all vermin and insects harbouring therein, as well as pulverising, sweetening, and preparing it for the reception of the early spring crops intended for it.

Also take advantage of dry days for wheeling from old Cucumber and Melon beds all waste manure, on to places where it is required. This should afterwards be spread over the surface at least six inches thick, and carefully and immediately dug in.

To Control Pea Mite.

These very destructive mites are becoming exceedingly numerous, and are doing much damage to vegetables. The following preparations have been found to be most successful against the pea mite:—

One part carbolic powder (15 per cent.).
Three parts lime, super, or gypsum,
broadcast over the plants, and worked into the soil at the rate of 2 cwt. per acre.

Tobacco dust (Pestend) and lime in equal quantities has been used in a similar way with some success by market gardeners.

Pruning Tools

We Stock a wide range of
Pruning and Garden Tools

Send for our free Catalogues.

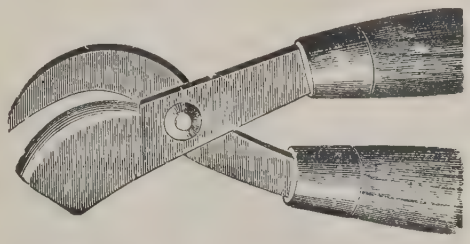
PRUNING SHEARS.

Amongst other types of Pruning Shears is that illustrated above; the genuine "Mexeur"; but with flat ribbon springs instead of wire spring as shown. Best shear Steel blades.

Solid forged steel frame.

8-inch, 7/3; 9-inch, 7/9; also other makes at 1/9, 2/-, 2/9, 4/3, 4/9, 12/-, 13/6, 14/6 per pair.

ENGLISH BRANCH CUTTERS.



Same pattern as illustrated above, but of heavier pattern, best quality Steel Blades, fast handles of polished wood.

No. 1, length 27-inch 7/9
No. 2, length 30-inch 9/3
No. 3, length 33-inch 10/–
No. 4, length 36-inch 12/–

PRUNING SAWS.

Duplex Type, Plain Teeth one side, Lightening Teeth other side. Good quality blade, Beech handle.

12-inch, 3/3; 14-inch, 3/6.

California Pattern (illustrated), 14-inch, 4/9.

McPherson's
Proprietary Limited

554-566 and 582-592 Collins St., MELB.;
51-65 Bathurst St., SYDNEY;
116-130 Waymouth St., ADELAIDE.

The Royal Agricultural Society of Victoria.

GRAND ANNUAL EXHIBITION

9 DAYS

20th to 29th September, 1928

Fruitgrowers!— This is the show at which you should exhibit

Over £400

is offered in PRIZE MONEY, in addition to FOUR HANDSOME SHIELDS

Entries close Saturday 18th August at noon

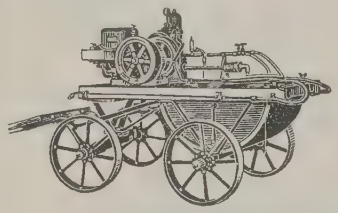
Prize Schedules, Entry forms, etc, on application to—

HENRY SCHWIEGER, *Secretary.*

NOTE ADDRESS *Temple Court, 422 Collins Street, Melbourne*

"SUNSHINE" The Ideal Power Spraying Plant

2 H.P. PETROL ENGINE, DIRECT GEARED PUMP, STURDY TRANSPORT, 100 GAL. VAT.



Acid Resisting Cylinder Linings, Plungers and Valves, Efficient Agitation. Machine Cut Gears. Steady Flow at High Pressure. High Quality Hose. Rubber Lined Vat Decking. Non-upsettable Transport. Long Life Nozzles.

PRICE COMPLETE, £122 F.O.R. SUNSHINE. Less 5 per cent. for Cash.

Illustrated Booklet and Particulars of Terms sent Free on Request

ALSO MANUFACTURERS OF ORCHARD IMPLEMENTS.

Mouldboard Ploughs in several types, 1 to 3 Furrows, Disc Ploughs, Scufflers, Tyne Cultivators, Harrows, etc., etc.

General Catalogue of Sunshine Machinery Posted Free on Request.

H. V. McKAY PTY. LTD. Sunshine Harvester Works, Sunshine, Vic.
Also Sydney, Brisbane, Adelaide, Perth.

FERGUSONS' PEDIGREE FRUIT TREES

APPLES, PEARS, PEACHES, ALMONDS, PLUMS, CITRUS (All Sorts, Including VALENCIA, WASHINGTON, GRAPE FRUIT), PERSIMMONS, APRICOTS, CHERRIES.

Quality Prime for 1928. Satisfaction Assured. Get Our Prices. Catalogues Ready.

Established 1848. **F. FERGUSON & SON** Australian Nurseries.

Also at Camden. HURSTVILLE, N.S.W.

POTASH FOR ORCHARDS.

PERHAPS potash is the fertiliser the use of which is least understood amongst the various "plant foods" offered to the orchardist.

It is generally recognised that it does improve the quality and appearance of fruit, and there is also a growing appreciation of its effect on yield per tree. At times that effect can be very striking indeed, but just why increased yields can follow on potash application is not generally given much consideration to. The fact is that the effect of potash is extended over a longer period than is that of any other mineral fertiliser, and so its action is not so easily observed, as is that of the rapidly-acting nitrogenous elements, for instance.

Classical investigation has established the fact that it is in the young and forming parts of a tree that the greatest percentage of potash is to be found. The result of a deficiency of available potash at the command of a tree upon the fruit yield of the following year, quite apart from the reduction of the crop of the current season, can be easily imagined.

It is true of certain Apple varieties that good crops and reduced ones follow each other with fairly regular incidence, but that is not characteristic of all varieties, and is not so in the case of other fruits. Yet the idea has long existed in districts where little or no fertilising is carried out that "Nature gives the trees a rest." Impelled to find potash from the soil, the tree involuntarily gives the orchardist a rest—from picking! In a word, in the absence of adequate available potash supplies, the tree is only able to produce a crop—there is not at its disposal the potash requisite to build up the fruiting wood of the following year.

Again, it is not widely recognised that potash, although in water soluble form, should be applied as earily as possible. It is probable that it is slower in its action—in its breaking up and re-combination in the soil—than is, say, superphosphate. (Potash, whether applied as muriate or sulphate, is taken up by the root system as carbonate of potash solution.)

But whereas it is the well-known function of the nitrogenous fertilisers to induce a vigorous leafage, it is the mission of potash to act in conjunction with the chlorophyll of the young leaves to elaborate the sugar, starch, etc., which will later be transferred to the fruit.

There is no danger of potash "leaching"—it is held very firmly indeed in the soil. That potash should be applied early, and that it is sometimes considered to have failed, simply because of unduly late application, was brought home to the writer some years ago, at Doncaster, Victoria.

A Peach grower there purchased muriate for application to his trees, and subsequently wrote in sharp criticism of its apparent failure. A visit to the orchard elicited the fact that the potash had been applied only during the third week in October. The grower explained that his idea was to improve the quality of his fruit when he had studied the appearance of the coming crop. He was assured that the potash would benefit the following crop, and that it did so was proved by quadrupled use of the muriate a year later.

There is only one time to apply potash—and that time is "as early as possible."

Are You Planting Fruit Trees this Season?

If so, do not forget that we have ample supplies to offer.

Trees grown at Kinglake and Yarra Glen

Larger, Stronger, Healthier than ever

Apples.—Jonathan, Five Crown, Rome Beauty, Cleopatra, Granny Smith, Delicious, Democrat, Statesman, etc.

Also Pears, Plums, Peaches, Apricots, Quinces. Best varieties.

We must sell and are prepared to sacrifice the best trees for one season at prices far below the cost of production. Do not miss this chance—

Write now.

JAMES W. LAWREY, Kinglake Nurseries, Yarra Glen

ALADDIN LAMPS

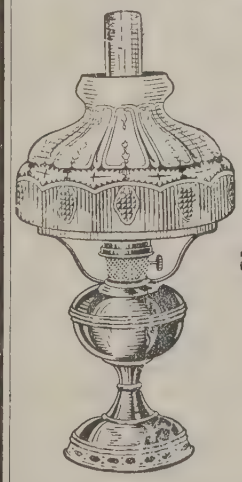


Table and Hanging styles. Make the home bright. Softer and better light than Electric. Keeps your eyes strong. No injurious rays. Light equal to sunlight. One Pint of Kerosene will burn for eight hours. Save their cost.

5/- allowed on old lamps. Miller or any metal-bowl lamps converted to the ALADDIN.

THE EDGELL SPRAY PISTOL,

Fitted with the Improved Small Jet.

The most economical Sprayer ever invented. Saves ½ cwt. arsenate of lead in a week's spraying. One man can do the work of two with the Edgell. Every user testifies to the above facts.

Catalogue Free.

Phone 6645.

T. W. SANDS, The Melbourne Lamp House

372 Lonsdale Street, Melbourne

The Fruit Trade

Market Reports and News Items

AUSTRALIAN AND NEW ZEALAND FRUIT IN GREAT BRITAIN AND THE CONTINENT.

LONDON.

Ex the "Demosthenes."

Victorian Pears ex the "Demosthenes" arrived in an over-ripe condition, and prices realised were:—Clairgeau, 8/9 box; Winter Nelis, 12/-; Bosc, 9/- to 13/6; Josephine, 13/6; Packham, 8/6.

Cabled advises received by the International Fruit and Mercantile Co., of Melbourne, show that Apples shipped by the Demosthenes arrived in good condition, and the following prices were obtained:—Cleos., 13/- to 14/9 Jons., 9/- to 11/9; Dunns, 10/- to 12/-; L.P., 9/- to 10/6; Munro's, 11/-.

I.F.M.C. were further advised that the Diamond brand pack is becoming popular, and brought prices slightly better than others. They were advised to ship in larger quantities.

Ex the "Ormonde."

Apples from **Victoria** shipped by the "Ormonde" sold at 10/- to 12/6 for Cleos.; Jons., 7/- to 10/-; London Pippin, 9/3 to 9/6; Rymers and French Crabs, 8/6.

Ex the "Barrabool."

South Australian Apples ex the "Barrabool" realised:—Cleos., 12/6 to 14/- case; Jons., 10/- to 11/6; Dunn's, 10/- to 10/6.

Later report: Jons., 10/- to 12/6; Ribston, 9/6 to 11/6; Reinette, 10/- to 11/-; London Pippin, 10/6 to 11/6; Alf., 9/6 to 11/-.

Victorian Jons., 10/- to 13/- for early sales; later prices were 9/- to 10/-; Cleos., 11/- to 12/6; Munro's, 10/6 to 11/6; Stewarts, 11/-. Pears: Vicars, 3/- tray. **Tasmanian** Duke of Clarence, 8/- to 9/-; Cleos., 10/6 to 11/6; Ribston, 8/6 to 9/-. Pears: Winter Coles, 3/6 to 5/6 tray.

Ex the "Comorin."

Owing to the South African supplies being exhausted, there was an active demand for Pears. **Tasmanian** Winter Coles fetched 4/6 to 5/6 tray; Bosc, 5/- to 6/6; Comice, 6/- to 9/-; Josephine, 4/3 to 5/3; Vicars, 3/6. **Apples:** Cox's, 8/3 to 12/- case; New Yorks, 10/- to 12/-; French Crabs, 8/3 to 10/6; Alf., 9/- to 10/6; others, 7/6 to 9/6. **Victorian** Pears: Bosc, Nelis and Josephines brought 18/- to 20/-; Cox Clairgeau, 12/- to 14/-; Vicars, 10/- to 12/-. **New Zealand:** Josephine, 4/6 to 6/- tray; Nelis, 4/- to 6/-; Bosc, 4/6 to 5/-; Barry, 3/- to 3/6.

Ex the "Comorin" and "Port Hobart."

Apples shipped per the "Comorin" and "Port Hobart" met with a good demand. **Tasmanian:** C.O.P., 9/3 to 13/- case; Cleos., 10/- to 11/-; Ribston, 8/- to 11/-; Jons., 9/6 to 9/9; Alf., 9/- to 10/6; Scarlet Pippin, 10/-; and others, 8/- to 10/-. **Victorian** Apples: Cleos., 12/- to 13/-; Dunn's, 10/- to 11/-; Jons., 8/- to 10/6; Five Crowns, 10/6. **South Australian:** Jons., 9/- to 11/6; Cleos., 12/6 to 14/-; Dunn's, 10/- to 14/-; Rome Beauty, 11/-; London Pippin, 10/6.

Ex the "Rotorua."

Pears from **New Zealand** ex the "Rotorua" fetched 5/- to 6/6 tray for Josephines, 2/6 to 3/- Winter Cole, Winter Nelis 3/- to 6/-, Barry's 3/- to 4/-.

Ex the "Oronsay."

Victorian and **New South Wales** fruit ex the "Oronsay" brought 6/- to 7/6 tray; Barry's, 6/- to 7/- half-boxes. **Tasmanian** Apples sold at 8/6 to 10/- for Scarlets; Cox's, 10/6 to 11/-; Munro's, 9/6 to 10/-; French Crabs, 10/-; Alfs., 10/-; New Yorks, 9/- to 11/-; others, 8/3 to 9/6.

Ex the "Moreton Bay" and "Ceramic."

South Australian Jons. ex the "Moreton Bay" and "Ceramic" realised 10/- to 11/6; Dunn's, 12/- to 13/-; London Pippin, 10/- to 11/-; Strawberry, 8/6 to 9/6. **Victorian** Pears ex the "Moreton Bay" were wasty, and Winter Nelis fetched 4/3 to 9/- half-box; Josephines, 3/9 to 8/9; Beurre Bosc, 1/6 to 7/6; Keiffer's, 9/- to 10/6 box; Glou Morceau, 10/6 to 15/-; Winter Cole, 7/6.

Ex the "Mahana."

Apples from **New Zealand** shipped per the "Mahana" realised:—Jons., 10/- to 12/-; Dunn's, 10/- to 12/-; Delicious, 10/- to 12/-. Cox's were over-ripe and wasty.

Ex the "Berwickshire."

Tasmanian Apples shipped per the "Berwickshire" sold at 10/- to 11/- per case for Sturmers; 10/- to 10/6 for Cleos.; Dunn's, 9/6 to 11/-; Jons., 7/6 to 9/6; Cox's, 8/- to 9/6.

Ex the "Port Hunter."

New Zealand Apples ex the "Port Hunter" fetched:—Dunn's, 12/- to 13/-; Cox's, 15/- to 18/-; Jons., 12/- to 14/-; Delicious, 11/- to 12/6; London Pippin, 12/- to 13/-.

LIVERPOOL.

Ex the "Runic" and "Demosthenes."

Victorian fruit ex the "Runic" and "Demosthenes" realised: Cleos., 12/9 to 14/-; Dunn's, 11/- to 12/9; King David, 10/9 to 12/-; Jons., 10/- to 13/-; London Pippin, 9/6 to 12/3. **Tasmanian:** Alf., 10/3 to 13/-; Cleos., 13/- to 14/9; Cox's, 11/6 to 14/-; Worcester, 10/6 to 13/-; Ribston, 8/9; Duke of Clarence, 9/- to 11/3. **Tasmanian** Pears ex the "Runic" fetched 4/- to 6/- tray for Beurre Bosc, and 4/6 to 4/9 for Capiaumonts.

HULL.

Ex the "Largs Bay."

Apples shipped by the "Largs Bay" met with a good demand. **West Australian** Cleos. fetched 13/6 to 14/-; Dunn's, 9/- to 12/-. Pears: Glou Morceau, 6/- to 6/6 tray; Comice, 5/3 to 5/9; Josephine, 4/9 to 5/-; Winter Nelis, 4/3 to 5/3; Vicar, 14/3 box; Bartlett, 13/- to 14/3; Keiffer, 10/6. **South Australian** Cleos., 13/- to 13/6; Jons., 10/6 to 11/-; Dunn's, 10/- to 12/-. **Victorian** Jons., 8/- to 10/9; Cleos., 13/- to 13/6; Munro's, 9/6 to 11/6; Cox's, 11/- to 13/9; Rymer, 9/- to 10/-; Five Crown, 10/3 to 11/6. **Tasmanian** Cox's, 10/3 to 12/6; Cleos., 11/- to 13/3; Jons., 8/6 to 10/-; Munro's, 9/6 to 11/6; Scarlet, 8/6 to 10/6; Ribston, 9/-.

Ex the "Port Huon."

Tasmanian Pears fetched 17/- to 19/- box for Bosc; Capiaumont, 4/6 to 5/6 half-cases.

Ex the "Otira."

Victorian Apples ex the "Otira" sold at:—Cleos., 13/- to 15/3; case Dunn's, 12/- to 13/-; Jons., 10/- to 12/6; Munro's, 12/3 to 13/6. Small lots of **Western Australian** Grapes brought 16/- to 20/- case for Black Malagas; Ohanez, 18/- to 25/-.

Ex the "Moreton Bay" and "Otira."

Victorian Apples ex the "Moreton Bay" and "Otira" realised 13/- to 15/- case for Cleos.; Jons., 9/6 to 10/9; Dunn's, 11/- to 13/3; London Pippin, 10/- to 11/-; King David, 10/- to 11/-; others, 9/6 to 12/6.

HAMBURG.

Ex the "Port Huon."

Apples from **Tasmania** shipped per the "Port Huon" fetched the following prices:—Cleos., 12/- to 18/6 case; Cox's, 10/- to 15/-; others, 8/9 to 14/-. **West Australian** Dunn's, 12/- to 21/6; Cleos., 9/- to 19/9; Jons., some of which were over-ripe, 6/- to 16/6. Pears realised 9/6 to 19/6 case for Winter Nelis; Glou. Morceau, 9/- to 14/9; Beurre Bosc, 12/- to 23/6; Josephines, 14/- to 22/6; Vicars, 13/- to 15/-.

Ex the "Otira" and 'Port Brisbane."

The Hamburg Apple market is easier, owing to the arrival of three steamers, carrying 150,000 cases, of which about half has been sold. **Victorian** Cleos. fetched 11/- to 15/6 per case; Jons., 8/- to 12/6; Dunn's, 10/- to 15/-; Rymer's, 9/6 to 11/6. **South Australian** Cleos., 12/- to 16/-; Dunn's, 11/- to 16/-; Jons., 9/- to 12/-. **West Australian** Cleos., 11/- to 14/6; Jons., 9/- to 12/-; Dunn's, 11/- to 13/6. Pears in boxes realised 11/- to 16/6 for Josephines; Vicars, 6/- to 10/-; Keiffers, which were wasty, 2/- to 7/-; Winter Nelis, 12/- to 16/-; Broome Park, 10/- to 12/-; Glou. Morceau, 15/- to 16/-.

Ex the "Asphalion" and "Port Brisbane."

Victorian Apples ex the "**Asphalion**" and "**Port Brisbane**" realised:—Cleos., 12/- to 16/6; Dunn's, 12/- to 16/-; Munro's, 12/- to 15/3; Jons., 10/- to 13/9; London Pippin, 11/- to 13/-. **South Australian** Cleos., 12/6 to 17/-; Dunn's, 12/6 to 16/6; Jons., 10/- to 13/6. **Tasmanian** Cleos., 12/- to 16/6; Dunn's, 11/- to 16/-. Cox's were mostly over-ripe, and brought 10/- to 13/6; others, 10/- to 13/-.

Ex the "Asphalion."

Messrs. Barker, Green and Parke Pty. Ltd., Australasian representatives for Messrs. Timm and Gerstenkorn, Hamburg, have received the following cable of prices realised for fruit ex the "Asphalion":—

To-day 69,000 "Asphalion," remainders "Port Brisbane":—South **Victorian** Cleos., Dunn's, 12/- to 16/-; Jons., 9/6 to 13/-; Cox's, 11/- to 12/-; Munro's, 12/- to 15/-. **Tasmanian** Cleos., Dunn's, Munro's, Jons., 1/- less, same market, slightly improved; closed firm.

Ex the "Nestor."

South Australian Apples ex the "**Nestor**" fetched the following prices: Jons., 10/3 to 13/3; Cleos., 13/- to 14/-; Dunn's, 10/- to 13/-. **Victorian** Jons., 10/- to 12/-; Romes, 11/- to 14/-; Cleos., 12/6 to 16/-; Dunn's, 12/- to 14/6.

Ex the "Abberkirk."

To-day 96,000 "**Abberkick**" **Tasmanian** Cleos., Dunns, Jons., Cox's, Munro's, 10/- to 13/-. **Victorian** Cleos., Dunn's, Munro's, 11/- to 14/-; Jons., 10/- to 13/-. Market, except Jonathans, weaker. Best Pears, 12/- to 17/-.

New South Wales.

Sydney (17/5/28).

Mr. F. Chilton, City Fruit Markets, reports under date 17/5/28 as follows:—The market is over-supplied with medium quality Apples and Pears. A fair demand exists for most other classes of fruit of choice quality. Queensland Fruits: Bananas, 14/- to 26/- per case; Pines, smooth leaf, 7/- to 20/; Custard Apples, 3/- to 6/- per half-case. N.S.W. Fruits: Bananas, 14/- to 27/- per case; Lemons, 6/- to 10/- per bushel case; Navels, 6/- to 10/-; Mandarins, 9/- to 12/-; Oranges, main crop, 4/- to 7/-; Apples, Jonathan, 4/- to 6/-; R.B., 4/- to 7/-; F.C.P., 2/- to 4/-; G.S., 6/- to 8/-; Pears, P.T., 6/- to 9/-; W.C., 4/- to 8/-; Passions, 8/- to 14/- per half-case; Grapes, Black Cornichon 6/- to 9/-, White Ohanez 4/- to 6/-; Tomatoes, 7/- to 16/-; Persimmons, 2/6 to 4/-. Victorian Fruits: Pears, P.T. 6/- to 9/- per bushel case, Howell's 5/- to 7/-, W.C. 4/- to 7/-, B.B. 4/- to 6/-; Apples, Jonathan, 3/- to 5/6. Tasmanian Fruits: Pears, W.C. 2/- to 4/- per half-case, W.N. 2/- to 4/-, Jos. 3/- to 4/6, G.S. 2/6 to 3/6; Apples, Jonathan 3/- to 5/6 per bushel case, Del. 4/- to 6/-, T.P. 3/- to 4/6, G.F. 3/- to 5/-, F.C. 4/- to 6/-, N.Y.P. 4/- to 5/6, Aro. 3/- to 5/-.

Victoria.

Melbourne (26/5/28).

Apples, dessert, 2/- to 4/6 per case; cooking, 2/- to 4/-; Grapes, 6/- to 9/-; Lemons, Victorian, 10/- to 14/-; Mandarins, 11/- to 15/-, a few special lines higher; Queensland Oranges, 9/- to 10/-; Victorian Navel, 10/- to 16/-; Passion Fruit, 16/- to 20/-; best quality, 24/- to 30/-; Pears, 2/- to 5/-; Pineapples, colored, 25/-; small or green sorts lower, per double case.

Western Australia.

Perth (19/5/28).

Apples, Dunn's, 10/- to 14/6 dumps; others from 8/-; Cleos., 11/6 to 14/-; special, to 16/6; others from 6/-; Jons., 12/- to 18/-; special, to 20/-; others from 6/-; Granny Smith, 12/- to 17/-; others from 9/-; Rokewoods, 9/6 to 14/-; Romes, 12/- to 15/-; others from 10/-; Yates, 13/- to 17/-; special, to 19/-; others from 9/-; Pears, Keiffers, 12/- to 16/-; other varieties, 4/6 to 10/- flats; Strawberries, 19/- to 22/6 per doz. punnets; Navels, 10/- to 14/-; special, to 16/6; Oranges, 5/- to 8/- flats; special, to 10/-; Mandarins, 8/- to 13/6 flats; special, to 17/-; Grapes, 12/- to 16/3 open; Lemons, 5/- to 8/6 flats; others, from 2/6.

Queensland.

Brisbane (22/5/28).

Local Fruit.—Apples, Stanthorpe, eating, 4/- to 5/-; G.S., 5/- to 8/- a bushel case; Lemons, 1/6 to 3/6 a half-bushel case; Oranges, 3/6 to 5/- a bushel case; Navels, 5/- to 7/-; Mandarins, Glens, 10/- to 14/-; Scarlets, 7/- to 10/-; Emperors, 8/- to 11/-; Feutrals, 6/- to 8/-; Papaws, colored, 8/- to 11/-; green, 3/- to 6/-; Pines, rough, 1/- to 5/- a doz., 4/6 to 8/- a case; smooth, 7/- to 13/-; Passion Fruit, 12/- to 18/- a half-bushel case; Grapes, 3/- to 5/-; Custard Apples, 2/6 to 3/-; 3/6 a tray. Interstate Fruit.—Apples, Tasmanian, F.C., 9/- to 10/- a bushel case; A.R.O., 4/- to 5/-; R.B., 5/- to 6/-; F.C.P., 5/- to 6/-; W.Y.P., 6/- to 7/-; S.P.M., 5/- to 6/-; A.P.M., 4/- to 5/-; Victorian, Jon., 5/- to 6/6; Pears, W.N., 8/- to 10/-; Jos., 8/- to 10/-; W.C., 8/- to 10/-; B.B., 7/- to 8/-; G.S., 6/- to 9/-.

South Australia.

Adelaide (19/5/28).

Apples (eating), 3/- to 5/- per case; cooking, 2/6 to 3/-; Bananas, 35/- to 38/- per crate; Lemons, 8/- to 10/- per case; green, 7/-; Melons (Pie), 4/- per cwt.; Almonds, 12/- per dozen lb.; Oranges, 10/- to 11/- per case; Mandarin, 18/-; Navels, locals, 15/- to 18/-; Navel, 18/-; Passion Fruit, 26/-; Pears, eating, ripe, 5/- to 6/-; Quinces, 3/6 to 4/-. Fruit prices are without cost of cases.

Tasmania.

Hobart (19/5/28).

Apples, Del., choice, 4/- to 4/3; medium and fair, 2/- to 3/9; Jon., choice, 3/6 to 4/6; fair and ripe, 1/9 to 3/-; R.B., 2/6 to 3/6; S.P.M., 1/6 to 2/6; S.T.P., 2/- to 3/9; L.S., best, 2/- to 3/8; small, 1/6 to 2/6; Alb., 2/6 to 3/4; N.Y.P., prime, 4/6 to 5/-; medium, 3/- to 3/9; T.P., 1/6 to 2/6; C.P.M., choice, 4/- to 5/-; small, 2/- to 2/6; C.O.P., 1/6 to 2/-; F.C., 2/- to 4/3; inferior, 1/- to 2/-; Pears, G.M., 3/- to 5/-; Jos., 3/- to 5/6;

New Zealand.

Dunedin (18/5/28).

Reilly's Central Produce Mart report prices as follows:—The last of the Ohanez Grapes from Sydney, came forward and met a good market, 22/6 to 24/- being secured for ¾ cases. First consignments of Sydney Mandarins, rather green, realised 22/6; and a nice parcel of 100 cases of choice Navels in gin cases, realised 27/-. Auckland Passions are still coming forward, and choice quality fruit are realising 19/- for half-cases. American Oranges sold freely at 57/6; Grape Fruit, 45/-; and Lemons at 57/6. Rarotonga Oranges, 28/-, and Rarotonga Bananas, 28/6; Suva Bananas making 35/- per case.

SELLING FRUIT IN MELBOURNE

Expert Services Necessary
Facilities Offered by Herbert Wilson
WESTERN MARKET, MELBOURNE

THE SYSTEM of fruit distribution is on a par with the usual activities of commerce. The service of the wholesale commission agent is an essential link in the chain. The fruitgrower is the wholesale producer, who, in terms of commerce, might be regarded as the manufacturer. Then comes the commercial wholesale commission agent who sells to the retailer, who in turn distributes to the public. The retailer who sells to the trade renders practically the same service as the shop-keeper who sells ties, collars, or boots.

The point here stressed, is the service rendered by the wholesale commission agent. It is just here where the grower needs to exercise his discretion.

Wholesale fruit distribution is more intricate than would appear at first sight. The wholesale agent in the first place owes a duty to the grower. In securing the best prices for the grower, the agent has to understand markets and distribution thoroughly, remembering also that the retailer has to carry on his business, and must necessarily make a profit. There is always a meeting ground in the matter of prices, remembering that the trade has to go on steadily year by year. The thoughtful grower does not look for occasional fancy prices, when these in turn may have effect in reducing the flow of supplies to the retailer. It is the good average return for the season which benefits the grower most. Fancy prices often have a boomerang effect.

The wholesale agent must have an intimate knowledge of both wholesale and retail selling. He must understand varieties and quality. He must also have—and this is a very important point—a knowledge of the retailers with whom he is doing business, in order to know where the good "marks" are, and to avoid bad debts.

With regard to organisation, the wholesale agent must necessarily be a good organiser in his own sphere, with an intimate knowledge of capital and finance, the handling of a staff, organisation of inwards and outwards delivery, and generally have the specialised experience to continually conduct a business in perishable commodities, so as to maintain a steady flow of trade.

In submitting the foregoing details, Mr. Herbert Wilson places his specialised knowledge and organisation before the fruitgrowers of Australia. For many years, Mr. Wilson was a Partner in the firm of G. Woolf & Sons, of the Western Market, Melbourne. From his practical knowledge gained over many years of activity in this connection, and having the good-will of the growers with whom he had contact, the time came when he decided to open a business on his own account.

It must be remembered that Melbourne is steadily growing, and the need was felt by Mr. Wilson for providing a new avenue for trade distribution, in which his specialised knowledge could have adequate scope.

Mr. Wilson is esteemed in business and commercial circles, with a lifetime experience behind him in fruit distribution, and possessing the ability to actively conduct an expanding business. He is looking forward to a continuance of the opportunity to enjoy the effects of the good-will of growers in the profitable disposal of their fruit crops. Mr. Wilson is an accredited agent for the N.S.W., Murray Citrus Growers' Co-op. Association, and Victorian Citrus Associations. He has a good knowledge of all branches of the trade and the handling of Apples, Grapes, Peaches, Pineapples, Bananas, in fact all the fruits that are handled in Melbourne.

In thus placing his services before fruitgrowers, Mr. Wilson looks forward to maintaining and increasing his present connections. Growers visiting Melbourne are invited to call and see Mr. Wilson personally at his address in Western Market, 56-58 William-street, Melbourne, and from those unable to call, correspondence would be welcomed. Consignments are solicited in the various States, and growers are notified that the business entrusted to Mr. Wilson will have his personal attention.

EFFICIENCY

IS THE KEYNOTE of successful MARKETING. Efficiency on the part of the grower in growing, grading and packing, and efficiency on the part of the salesman

With 18 years experience in Melbourne Markets I am in a unique position to render prompt service to buyers. This is of utmost importance to growers who consign to me

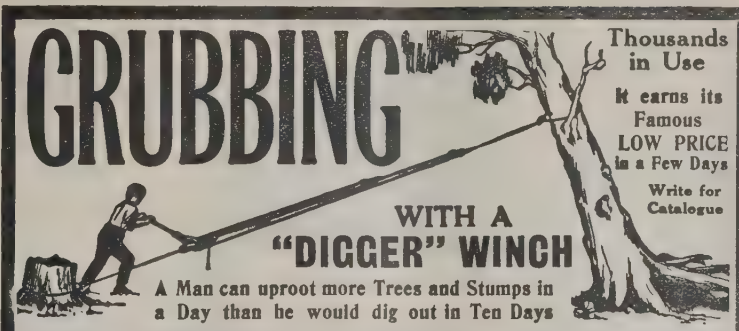
HERBERT WILSON

56-58 Western Market, Melbourne

City Telephone: M 2012 Private Phone: M 3055

City Address: Box 4003 G.P.O. Spencer St., Melbourne

Are You a
"Garden Lover"?
If so
Write for Sample Copy
to
Garden Lover
Box 1944 G.P.O.
Melbourne

GRUBBING

Thousands in Use
It earns its Famous LOW PRICE in a Few Days
Write for Catalogue
WITH A
"DIGGER" WINCH
A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days
QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

SUPPORT CO-OPERATION
By Consigning your FRUIT to the
Producers' Distributing Society Ltd.
(Late Coastal Farmers' Co-operative Society Ltd.)
Agents for
"BLACK LEAF 40"
and all Orchard Requirements
Melbourne Sydney
Newcastle Hobart
Launceston Devonport

Prove PATERSON'S CONCENTRATED
"CLENSEL"
INSECTICIDE & FUNGICIDE.
(British Product)
by testing it!

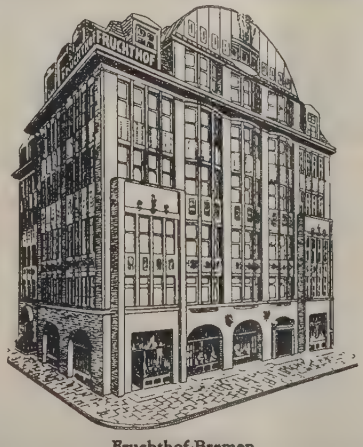
Now that **"Clensel"** is here, we are daily receiving glowing accounts of its effectiveness from prominent Australian Orchardists, who have tested it for the eradication of all orchard pests.

"Clensel" is the only combined Insecticide and Fungicide Spray on the market, and has achieved remarkable results in England and India, where it has been used extensively for years.

"Clensel" is **NON-POISONOUS, NON-INJURIOUS,** and **NON-INFLAMMABLE,** and can be sprayed at any time (no other solutions required) with the utmost satisfaction.

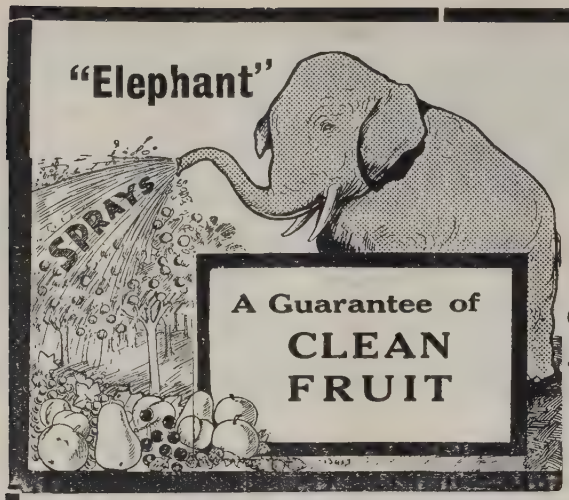
"Clensel" is instantly soluble, and a pleasure to spray with. Enquiries solicited with confidence.

CLENSEL PTY. LTD., 184-6 Queen Street
C 2654. MELBOURNE, C.1


Fruchthof-Bremen

Fruchthandel Gesellschaft
Scipio & Fischer
Fruchthof BREMEN Germany
Cable Address: "Orange" Bremen . . . Established 1902

AUSTRALIAN REPRESENTATIVES:
Victoria: The International Fruit & Mercantile Co., 410-416 Flinders Lane, Melbourne.
West Aust.: Messrs. Paterson & Co., Ltd., Perth.
Tasmania: Messrs. E. R. Cottier & Co., Hobart.



ORCHARDISTS

Spraying is essential, and your best Insurance. Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand

Sprays Only

NOW IS THE TIME TO ORDER YOUR SPRAYS.

Use "Elephant" Brand

Prepared Red Oil

Manufactured from a heavy bodied mineral oil, combined with ingredients only necessary to bring about a perfect emulsion when mixed with cold water.

THIS OIL CONTAINS 85% PURE MINERAL OIL.

also

Prepared Crude Oil

ORDER NOW.

NICOTINE SULPHATE (Black Leaf 40)	BORDEAUX POWDER	ARSENATE OF LEAD (Paste and Powder)
LIME SULPHUR	BORDEAUX MIXTURE SOFT SOAP	BLUESTONE

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of "Elephant" Brand Sprays

Manufacturing Chemists, MADDEN GROVE, BURNLEY, E.1., MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for July, 1928.

Illustrations.

Apple Tree Top Worked .. 251
Lord Nelson Apple Tree at Glen Niven, Queensland 267
Cups for Apple Packing Competition 270

Subjects.

Answers to Correspondents 262
Beekeeping Notes 283–4
Bud Selection 261
"Canadian" Case for Apples and Oranges 253–4
Cultural Notes for July 256
Compulsory Co-operation Rejected 268–9
Conference of Ministers of Agriculture 278
Citrus News and Notes .. 271–2
Canned Fruits 264–274
Dried Fruits Department .. 265
Editorial Chats 261
Insect Pests in the Orchards 277
Markets (British, Foreign and Australian) .. .. .. 288–XV.
New South Wales Fruitgrowers' Conference 260
New South Wales Notes and News 263–4
News in Brief 266
New Zealand 252
Pruning Fruit Trees and Grape Vines 257
Personal 266
Poultry Notes 283
Queensland Notes 267-270
Russell: Sir John, Visits Australia 259
Top Working of Fruit Trees 251–2
Tasmania: News and Notes . 264
Vegetable Culture 281
Victorian Fruitgrowers' Conference 254–5
Victoria: News and Notes .. 279
West Australia 275
Woolly Aphis; New Treatment 265

INDEX TO ADVERTISERS.

Books, Publications—
"Garden Lover," Bank House, Bank Place, Melbourne, p. xxv., xiii.
"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii.

Canning Machines—
Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. xi.
Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—
Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—
"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. 239.

Dusting Machines—
Atomol Dusts Ltd., Dumphries Place, Adelaide, p. xxii.

Fruit Buyers—
Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xx.

Fruit Tree Suppliers—
Brunning, John, and Sons, Somerville, p. 250.
Ferguson, F., & Son, Hurstville, N.S.W., p. xxi.
Lawrey, J. W., Yarra Glen, Vic., p. 287.
C. A. Nobelius & Sons, Emerald, Vic., p. 281.
Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 276.
Two Bays Nurseries, Mooroduc, Vic., p. xxii.
Walker, Frank, 110 Brisbane Street, Launceston, Tas., p. 275.

Fruit Graders—
"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood Vic., p. 284.
"Ellis," D. Harvey, Whitehorse Road, Box Hill, p. 280.

Fruit Picking Bag—
The "Bay View," F. R. Mellor, 440 Elizabeth St., Melbourne, p. 278.

Manures, Fertilisers, &c.—
Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. 277.
Bone Dust, P. Fitzgerald & Sons, Warragul Rd., Oakleigh, Vic., p. xviii.
"Nitrophoska," "Urea," Dyes & Chemicals (Aust.) Ltd., Sydney & Melbourne, cover i.
"White Star" Lime, J. H. Rudd & Co. Pty. Ltd., 115 William St., Melbourne, p. 286.

Orchard Ploughs, Cultivators, &c.—
D. Harvey, Box Hill, Melbourne, p. 280.

Orchard Requisites—
McPherson's Pty. Ltd., 582 Collins St., Melbourne, Vic., p. 285.

Patent Attorney—
Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. 288.

Poultry—
Karswood Poultry Spice, Agents all States, p. 282.

Refrigerating Machinery—
Werner, R., & Co. Pty. Ltd., Richmond Vic., cover iii.

Roller Conveyors—
Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xix.

Spray and Dusting Material—
"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. iv.
"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.
"Elephant" Brand, Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. xiv.
"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.
"Clensel," Clensel Pty. Ltd., 184 Queen St., Melbourne, p. xiii.
Dusting Powders, Atomol Dusts Ltd., Dumphries Place, Adelaide, p. xxii.
"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.
"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. xiii.
"Black Leaf 40," Producers' Distributing Soc. Ltd., Sydney, p. 271.
Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. ix.
"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 271.
"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 269.

Spray Pumps and Guns—
"Bave-U" Power Sprayer, Russell & Co., Box Hill, cover ii.
"Cooper," Cooper Engineering Co. Ltd., Sydney and Melbourne, p. xi.
604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. v.
Ronaldson Bros. & Tippett Pty. Ltd., Creswick St., Ballarat, p. xvii.
"Sunshine Sprayer," H. V. McKay Pty. Ltd., Sunshine, Vic., p. xxi.

Strapping Fruit Cases—
Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.
"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. xx.

Tractors—
"Smithco" Friction Lift Co., 110 Sturt St., Sth. Melbourne, p. xviii.

Transport—
London and N. E. Railway, Burns, Philp & Co., agents, p. v.

Tree and Stump Pullers—
Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix.
"Digger," Quick Manufacturing Co., 75 Pender St., Thornbury, p. xiii.

Wire—
Commonwealth Barbed Wire & Nail Works Pty. Ltd., 94 Sturt St., Sth. Melbourne, p. xviii.

Fruit Trees

for 1928 Planting

APPLES	QUINCES	CHESTNUTS	OLIVES
PEARS	FIGS	GOOSEBERRIES	GUAVAS
PLUMS	CHERRIES	CURRANTS	BRAMBLES
PRUNES	WALNUTS	RASPBERRIES	LOQUATS
ALMONDS	ORANGES	NUTS	PERSIMMONS
APRICOTS	LEMONS	MEDLARS	VINES
PEACHES	MANDARINS	POMEGRANATES	STRAWBERRIES
NECTARINES	MULBERRIES	PASSIONS	RHUBARB
			LOGANBERRIES

All Leading Varieties from—

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 1866

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

HEAD OFFICE:

78a VICTORIA STREET, Melbourne, Victoria.

Address all correspondence to

Box 1944 G.P.O. Melbourne

New South Wales Office: 46 Market Street, Sydney. G.P.O., Box 2147.L.L. FRANK CLARKE, Representative.

Representatives in all States and New Zealand.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

American Office: S. D. McFadden, Pacific Bldgs., Market Street, San Francisco, Cal., U.S.A.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

ORANGE BLOSSOMS.

Have you seen those snowy blossoms,
hanging, honey-filled around you,
With their perfect waxy petals overladen with perfume?
Oh, what glory, splendour, sweetness,
oh, what fragrance and what beauty,
When the orange blossoms, minstrels of the spring, appear in bloom.

Have you walked between the orange trees, when the blossoms all have opened,
And their fragrance fills the atmosphere, and makes the air sublime?
If you haven't, then you know not of the thrills and exultations
That the orange blossoms give you, which will last for all the time.

Picked by all the June-time bridals, emblems of God's loving mercy,
Tokens of love's richness as they flutter in the bowers.
All God's goodness in their petals, all His love and all His virtue,
In the simple orange blossom, fairest queen of all the flowers.
—By Melvin Arbuthnot, in the "California Citrograph."

RUSHIN' THINGS.

A man walked into a Russian police station and told the officer in charge that he had found the watch he had previously reported stolen, in a drawer at home.

"You're too late," replied the officer, "the thief has been executed."

TOP WORKING OF FRUIT TREES.

A Quick and Satisfactory Method of Standardising Varieties and Introducing Pollenisers.

Australian and American Methods Compared.

The application of the principle in this article is broad enough to include all of our tree fruits—Apples, Pears, Cherries, Peaches, Plums, and Apricots—with this difference, that the four last-mentioned need more careful work in the matching of cambiums.

THE TOP WORKING OF FRUIT TREES is an important item in orcharding, especially as it is becoming increasingly apparent that it is better to specialise into fewer varieties.

Two general principles must be borne in mind.

Why Top-Work?

(1) The replacement of unprofitable varieties with profitable ones, and (2) supplying proper pollenisers in sterile and inter-sterile varieties of fruit.

The latter practice is being followed in U.S.A. in the younger plantings of Winesaps and Delicious where a third and a strong pollenising variety will be required if the Delicious are to prove productive year after year (states Mr. O. T. Clawson, in the "Skookum News," Wenatchee, U.S.A.). This need of supplying pollenisers is also evident in many Anjou Pear, Cherry and J. H. Hale Peach plantings of all ages.

Early Fruiting Desirable.

Whether we are interested primarily in supplying fruiting wood of a more profitable variety, or in developing fruiting wood to supply pollen to make profitable varieties set fruit, the same principle applies. We want to develop the earliest possible fruiting habit in the new variety that is consistent with the ultimate health, productivity and shape of our future tree.

Obsolete Methods.

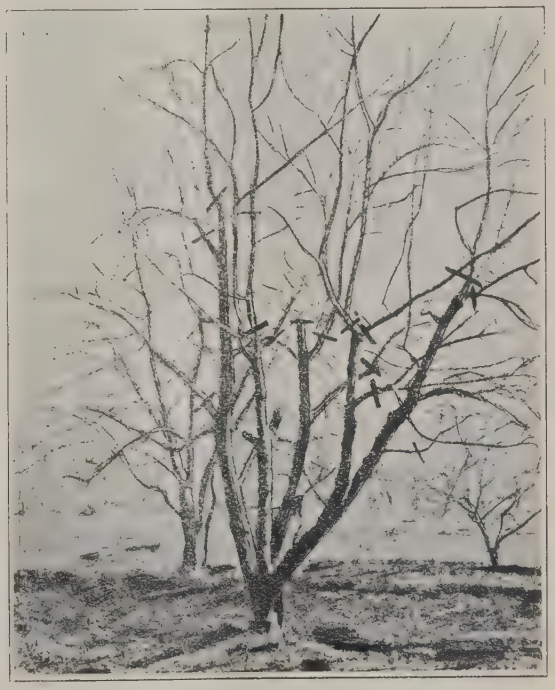
The old custom in top-working was to saw off the main limbs down to within a foot or two of the crotch cutting into the heavy leader wood and then placing numerous scions in an effort to "take up the sap."

Occasionally good trees have been produced under this obsolete method, but the usual result was an immense, tender growth on the part of the scions, followed too often by souring sap, scalding and the early death of the graft.

The big wound left by cutting off such large limbs was slow to heal over and with very few exceptions decay set in before the wound could be grown over. At best this old method was followed with good-looking tops, but with rotten-hearted main limbs and trunks. No wonder the average man said that top working was a failure!

In addition to the unhealthy condition in which the grafted tree was left, it was found that the grafts had to spend many years in wood growth to develop enough top to balance the root system before they reached a stage of normal growth and the production of fruiting wood.

In fact, it was necessary to grow back in the form of grafts almost as much wood as was cut out before grafting, in order for the new top to produce a normal crop of fruit. Seven, eight and ten years were often consumed in developing the new top to the state of profitable production comparative to the production before grafting.



Senator Apple tree top worked with Delicious in the spring of 1921; started bearing 1923, producing good crops ever since, including 16 bushels in 1926.

General Tendency in Methods.

For several years investigators' ideas have been going higher and higher as to the proper place for grafting. After all, we are interested only in the fruit that is produced on a tree or the blossoms it bears, so in changing the variety of a tree we are interested in nothing more than the fruiting wood.

It makes no difference if the trunk, leaders and the butts of all laterals are Jonathan, Delicious,

Sturmer, or what-not, so long as the fruiting wood is of the variety we want. Then, too, if we must have approximately that much wood in the tree before it returns to normal production, there is no advantage in sawing it out and then sit by impatiently while we grow it over again.

Most men to whom one talks about top working the trees high, object that to do so will make their tops too high for a practical tree. This is not true unless the tree was too high to begin with as the graft will merely replace the wood that has been removed and thereafter the tree will grow normally.

The accompanying cut is the photograph of an old Senator tree which I

Top-worked in the spring

of 1921 and is now twenty-five years old. I am using this cut to illustrate the results obtained from high top-working. In grafting this tree, I followed up each leader, stubbing off each lateral at a distance from the leader until I reached a height and diameter of leader suitable for grafting. Scions were set in each stubbed lateral and in the top of the leader. The highest grafts in this tree are 13 feet from the ground.

One lateral was left as a "breather," but was removed during the summer of 1921 as unnecessary and a nuisance.

Before hot weather arrived the full extent of leaders and laterals was covered with water sprouts, shading the limbs and supplying leaf surface to keep the roots and stock healthy. Suckers were kept removed from within approximately a foot to the scions to give the grafts full advantages of air, sap and sunshine. All other suckers were left alone till dormant, pruning when they were removed.

For probably three years the tree grew heavily to suckers until the Delicious grafts had developed enough wood and leaf area to care for the sap flow. Now this tree suckers no more than adjoining standard Delicious trees.

Grafted in 1921, it had a few scattering Apples in 1923, blossomed heavily in 1924, but froze out with all my other Delicious, picked eight loose boxes in 1925, sixteen boxes in 1926, and twelve loose boxes in 1927. If all top worked trees had as good a record as this, top working would not have a black eye.

The grafts have never been cut back since they were set, and the tree is no higher than adjoining Delicious of the same age and with greater possibilities of coming down under heavy production. There is no noticeable loss of vigour, no sun scald or sour sap, and most of the unions are as good as new. In other words, I believe this tree is as good a Delicious to-day as though it had not been a Senator for eighteen years.

Remove Old Wax.

I believe that one of the principal sources of loss in grafts, especially on large stubs, is the result of leaving the old grafting wax covering the end of the stub with no opportunity of draining off the sap that collects there in the early summer. The sap collects under the wax, and is unable to get away so as it accumulates the wax rises and swells. The sap ferments and eventually breaks out, running down the side of the limb. In the meantime, conditions have been ideal for rot to develop. The best of the scions are scalded, and scald extends down the side of the stub.

I believe it highly advisable that any limb waxed last spring have that old wax removed this spring before growth begins. New wax may be applied after hot, dry weather arrives and the sun and air have thoroughly disinfected the wound, but if only small wood has been grafted I doubt the necessity of rewaxing the wounds.

* * *

Australian Experiences.

Commenting on the foregoing, Mr. Jas. H. Lang, an experienced grower, of Harcourt, writes:—

I have successfully carried out the method of heading back and grafting outlined in the above article for several years.

Pear trees over fifty years old have been thus dealt with, thirty to forty grafts being placed on a tree; in some instances, fifteen to sixteen feet from the ground. The new growth can then be hastened into bearing.

One graft of Winter Nelis has produced with me over eighty Pears the third year the tree was cut down.

The main point is to ensure a quick healing of the bark round all wounds.

Strap grafting

is of great advantage here, or two or more grafts can be placed on one branch. Should the decay fungus get into the bark, that branch, and probably the whole tree, is doomed.

The decay of the wood, though it weakens the stability of the tree, does not interfere with its growing and bearing functions.

Lead paint may be used on the cut ends, or a dressing of Bordeaux paste; copper tacks driven into the wood also act as a fungicide.

Antiseptic surgery is just as important for fruit trees as it is in our hospitals, and no doctor would dream of going back to the old methods.

The principle underlying each is the same. A chemically clean wound ensures rapid healing. With proper precaution, it should be possible to deal with the oldest trees, and thus reduce materially the quantity of fruit of second or third rate varieties at present being put on all our markets.

NEW ZEALAND.

The reduction of varieties in commercial orchards, and the improvement of varieties by selection, were points stressed by the President of the N.Z. Fruitgrowers' Federation in a recent address.

Research stations for plant breeding, bud selection, and for investigating the stock question were urgently needed.

What is the Best Case for Apples and Oranges?

"Canadian Standard" 18 x 11½ x 10½ is Recommended by Victorian Department of Agriculture.

The term "Standard" is Suggesred Without Prefixing "Canadian."

Details for Apple Packing are Here Given.

EXPERIENCE in the packing of Apples for local, interstate and export trade has convinced the experts of the Victorian Department of Agriculture that the Canadian standard bushel case, 18 x 11½ x 10½, is the most serviceable—not only for Apples, but for Oranges, too.

This Canadian standard case is used almost exclusively for the boxed Apple trade of the Pacific Coast of U.S.A.

This case is more easily packed than the Australian "dump" bushel case, and presents a better appearance. The Canadian type case holds, on the average, about the same quantity of fruit as does the dump case; in some instances the Canadian case holds more than the dump, in some cases less.

A wall chart is being prepared by the Department of Agriculture, showing the value of the Canadian type case and the packs for the different sizes of Apples. In advocating this case for general use, Mr. Basil Krone, Fruit Packing Expert of the Department, sets out the following hints:—

Important.—Packing fruit to the **correct height** in the case, and the **snugness** of the specimens in each layer are the important features for its safe carriage over long distances.

Packs to Adopt that will Bring the Fruit to the Correct Height in the Case.

Canadian "Standard" Case (inside measurement 18 x 11½ x 10½).—Cub. capacity, 2,173.5 cub. inches, plus more than 50 cub. inches wih the "bulge."

Apples of similar size may be packed in various ways. This depends if the variety is "long," "flat," or "medium-shaped," or have been selected as large or small for the particular size, such as large 2½in. or small 2½in., etc.

Note.—The beginner is advised when packing Jonathans or other round-shaped varieties, to try first of all the packs marked x, adopting the others as circumstances make them desirable.

Adopt 3-3 packs in preference to 2-2 packs for sizes smaller than 175 count, unless unavoidable.

Some sizes must be packed tighter, and others looser than usual, to attain the correct height. The Apples should be spread evenly, yet firmly, should the size demand that they be packed "looser" than usual.

Counts from 72 to 113 inclusive are not recommended for export.

The diameter of an Apple is measured from "cheek" to "cheek," not from stem to eye; therefore, for purposes of this chart, all Apples measuring 2¼ inches in diameter, also all other Apples over this size and up to, but not 2½ inches, are called 2¼ inches, and so on with the other sizes.

Knowing the **number of layers** packed in the case, **counting the top rows, and referring to the table**, the packer can tell at a glance the actual number of fruit in the case. **The marking number** for that pack should then be placed on the case.

Apples in Canadian "Standard" Bushel Case
(inside measurement 18 x 11½ x 10½).

Size.	Pack.	Layer.	L'y'rs.	T'tl.	Remarks.
2⅜in.	3—3	9 x 8	5	255	Pack tighter than usual.
	3—3	7 x 7	6	252	Pack looser than usual.
	3—3	8 x 8	5	240	
	3—3	7 x 6	6	234	Pack looser than usual.
2¼in.	3—3	8 x 7	5	225x	245 count in "dump" case.
	3—3	7 x 7	5	210x	228 count in "dump" case.
	3—3	6 x 6	6	216	Pack looser than usual.
	3—2	8 x 8	5	200	Pack tighter than usual.
	3—3	6 x 5	6	198x	Pack looser than usual.
2½in.	3—3	6 x 6	5	180	193 count in "dump" case.
	3—2	7 x 7	5	175x	Pack looser than usual.
	3—3	6 x 5	5	165x	175 count in "dump" case.
	3—2	7 x 6	5	163	
	3—3	5 x 5	5	150x	Pack looser than usual.
	3—2	6 x 6	5	150	168 count in "dump" case.
2⅝in.	3—2	6 x 5	5	138x	Pack looser than usual; 156 in "dump" case.
	3—2	5 x 5	5	125x	Pack looser than usual; 144 in "dump" case.
	3—2	6 x 6	4	120x	120-132 counts in "dump" case.
3in.	3—2	5 x 4	5	113	Pack looser than usual.
	3—2	6 x 5	4	110x	
	2—2	7 x 6	4	104	Pack tighter than usual.
	3—2	5 x 5	4	100x	108 count in "dump" case.
	2—2	6 x 6	4	96	Pack tighter than usual.
3¼in.	3—2	5 x 4	4	90	
	2—2	6 x 5	4	88	
	2—2	5 x 5	4	80	
	2—2	5 x 4	4	72	Pack looser than usual.
3½in.	2—2	4 x 4	4	64	Pack looser than usual.
	2—2	4 x 3	4	56	Pack looser than usual.

Remember.

1. The SECOND and ALTERNATE layers in each pack must NOT rest directly on top of the fruit beneath, BUT IN THE SPACES. Keep each Apple OVER THE "POCKET" formed by the layer beneath.
2. It is the SIZE OF THE POCKETS or spaces that regulates the HEIGHT OF THE FRUIT. The height of the fruit is controlled by the tightness of the layer.
3. CORRECT PLACING OF THE FIRST LAYER is the most important factor in securing the CORRECT HEIGHT.
4. All APPLES SHOULD BE PLACED ON THE "CHEEK," producing an even, but not necessarily a level surface, on each layer (see illustration).
5. NO TWO FRUITS REST DIRECTLY ON TOP OF EACH OTHER in any direction. (See illustrations of packed cases.)
6. Sizing and packing should be treated as two separate operations.
7. The DIAMETER OF AN APPLE is measured from cheek to cheek, NOT from stem to eye.
8. If your CLEATS show a tendency to SPLIT when nailing, drop them into a bucket of water for a few minutes.
9. LINING PAPER is NOT required for export. It prevents FREE CIRCULATION of air.
10. WIRE TIE all softwood cases to prevent BREAKAGE and ULLAGE in transit.
11. Rest your wire tying machine ON THE SIDE, and NOT ON THE "BULGE" of the case.
12. Keep the TIE WIRES CLOSE UP TO THE CLEATS and AVOID PRESSURE directly over the fruit.
13. LESS APPLES TOUCH WOOD in the Canadian case than in the "dump."
14. Stencil or label cases true to NAME, QUALITY, NUMBER, and SIZE.

15. From orchard to shed, at every step, HANDLE APPLES WITH GREAT CARE.
16. DON'T NAIL DOWN on the bare floor; place battens beneath, or use a "press."
17. Do not walk or sit on packed cases; cases so used may be opened by the agent to SELL THE WHOLE CONSIGNMENT.
18. Make cases UNIFORM, NEAT, ATTRACTIVE, INVITING.
19. ESTABLISH A REPUTATION for your fruit. Attention to details pays handsomely.
20. SLACK PACKING results in BRUISED FRUIT.
21. CEMENT-COATED NAILS are preferable to the ordinary type, FOR SOFTWOOD CASES.
22. A retailer purchasing a case of Apples with a number of inferior specimens included, is compelled to raise the price on the remainder to secure his profit; the increase in price to the consumer tends to decrease consumption; therefore, it is a decided advantage to pack true to grade.
23. STACK CANADIAN CASES ON THEIR SIDES; NOT on the "BULGE."
24. THE CORRECT "BULGE."—The "bulge" should be from one to one and a half inches above the top at the centre, but not more than half an inch at each end.
25. THE SECURITY OF YOUR FRUIT depends upon the "bulge," which, if properly formed, secures the snugness of the contents in all stages of transport.

Timber required to make the Canadian "standard" bushel case (18 x 11½ x 10⅛ inside measurement):—

Two ends, one piece each—11½ x 10⅛ x ⅞.
Two sides, one piece each—19½ x 10⅛ x 5-16.
Top and bottom, two pieces each—19½ x 5⅛ x 3-16.
Four cleats, one each end top and bottom—11 x ⅞ x ⅞.

Important.—These specifications should not be varied in the slightest particular.

It requires 32 nails to make the Canadian case, and 60 nails to make the "dump" case.

HANDLE FRUIT AS CAREFULLY AS EGGS.

VICTORIAN FRUITGROWERS' CONVENTION.

Fruit Council Disbanded.

A CONFERENCE of Victorian fruitgrowers convened by the Victorian Fruit Council, was held at the Burnley School of Horticulture on June 19th and 20th. Mr. J. H. Lang (Harcourt) presided.

In the early stages there was much interest in debating matters affecting the welfare of the industry, and several interesting addresses were given. At the conclusion there was an anti-climax, as the Council as at present constituted was voted out of existence.

The dissolution of the Council on its present basis leaves the way clear for a new organisation, particularly affecting Apple and Pear growers.

* * *

The Conference was a fairly representative one, there being over 100 delegates from 30 branches, as well as a large number of representatives of kindred organisations and visitors.

In opening the Conference, the Assistant Minister for Agriculture, Mr. Cain, stated he was pleased to see that growers were adapting themselves to scientific cultivation and marketing. There was in course of construction at Burnley a laboratory where, in a few months' time, the Science Branch of the Department would be housed. These officers would then have an opportunity of carrying out practical experiments for the solution of many problems. He believed that Australia could do all the things that any other country could do. It possessed many advantages which other countries did not.

The annual report stated that the various items referred to the Executive for action at last Convention had been dealt with. Sympathetic replies were received from the Minister for Agriculture regarding experimental orchards, stricter supervision of orchards and private gardens, rural bank, removal of wholesale markets, orchard tax, and amendment of Farm and Produce Act. Although several of these matters had been advanced, none were finalised. The simplifying of the procedure for the rebate on duty of softwood cases had been submitted to the Government: this should be further pressed, in view of the extension of country inspection and the probable larger quantity of softwood cases to be used in the future. Efforts to secure the affiliation of the Victorian Central Citrus Association with the Council had proved unavailing.

In moving the adoption of the report, the Chairman stated that it was pleasing to see the extension of the community packing system. This year Victoria had produced 3,000,000 bushels of Apples, of which 1,000,000 had been exported; 1,000,000 sold locally, and 1,000,000 were in cool stores for later markets. He complimented the Railway Department, the port authorities and the Fruit Exporters Handling Committee on the efficiency with which the export had been handled. On the whole, the inspection was satisfactory. In Harcourt 200,000 cases had been sent for export; 50 per cent. from one packing house. Standardisation of varieties was urgently needed, and the reduction of varieties now being shipped. By means of antiseptic tree surgery, unsuitable varieties could be worked over.

In seconding a vote of thanks to Mr. Cain, proposed by Mr. Tyner, M.L.C., Mr. Everard, M.L.A., urged the Minister to take action to allow city street fruit barrows to sell fruit until 11 p.m., and to permit an increase in the number of kerb markets. Last week nine kerb markets had sold 1,100 cases of fruit.

Inaccurate Press Reports.

A motion was tabled by Messrs. C. D. Colles and S. W. Smith, of Beaconsfield Upper, requesting more constructive reports in the public press, as at the present time certain disabilities of the industry were over-emphasised. After discussion, in which appreciation of the press was expressed by many speakers, the motion was withdrawn.

Orchard Tax.

The need for an orchard tax for organising the industry was expressed by many speakers. The Chairman said that £4,000 was collected in this way in N.S.W., and the system appeared to be operating successfully. Several delegates asked for details as to the prôposed allocation of the funds after collection.

On the motion of Messrs. R. M. Finlay (Diamond Creek) and H. L. Tompkins (Croydon), it was decided—

That this Conference reaffirms the principle of an orchard tax, and asks the Government to take a poll immediately.

Mr. Finlay suggested that as the Government had decided to take a poll of the citrus growers on this subject, the two polls could be taken simultaneously.

Mr. Colles, submitting a motion favouring closer supervision of orchards and of fruit sold locally by Government inspectors, two views were expressed—(1) The danger of infection from neglected orchards, and (2) that the present inspection was satisfactory. With the latter view, Mr. J. M. Ward was in accord. The motion was negatived.

Methods Abroad.

Mr. R. E. Boardman gave an address on "Fruitgrowing and Marketing in U.S.A. and England." He spoke of the efficiency of American growers in matters of production, co-operation, standardisation, marketing and advertising: also the co-operation between the producers and the distributors. Great Britain was Australia's principal export market: the trade there preferred long lines of standardised varieties, instead of a multiplicity of individual consignments.

Trade with China.

Mr. H. Louey Pang said there was a market in China for our fresh, dried, and canned fruits if shipping facili-

ties were available for Shanghai. In 1924, 975,987 cases of fresh fruit, valued at £201,077, were imported into China, of which Australia had supplied only 50 cases.

A National Organisation.

"The existence and future expansion of the industry depend on a lower cost of production and a wider market," said Mr. E. J. Mulvaney, O.B.E., a member of the Development and Migration Commission. He emphasised that a national organisation was the first essential, and suggested that the Apple and Pear Growers' Association should ask the Minister of Markets to convene a conference of representatives of growers from all the States to evolve a scheme of organisation on a Commonwealth basis. It was also essential that the growers should pledge themselves to contribute the necessary funds to enable the organisation to function effectively, otherwise it was bound to fail. A levy of one-eighth of a penny on this year's production of 9,000,000 cases would yield sufficient to finance a Federal organisation. It would enable a complete survey to be made of the Apple and Pear industry, which must be taken to ensure a sound basis and promote its development on successful lines.

The Export Trade.

Mr. H. G. Colombie, in an address on the marketing of fruit in Great Britain, urged closer study of the needs of English buyers—supplying the varieties needed in the most suitable packages. There should be standardisation of production, varieties and pack, and a wider distribution of the fruit in England. Years ago Australia had the market to itself, but now it was getting stronger competition. In order to curtail varieties he suggested that a list of those to be eliminated be prepared, and growers given a certain period to cut them out. The grower and Federal and State Governments could provide a fund to pay growers compensation during the change.

In reply to a question, Mr. Colombie said the report on the Cathay shipment issued by the Agent-General's department, stating that private treaty had realised better prices than at auction, was inaccurate, useless, and would only create suspicion. His advices indicated that the prices were altogether higher, and that a very much larger quantity was sold by auction than by private treaty, and gave the better returns.

Mr. Thomas moved—

"That this executive take steps to secure a wider distribution of fresh fruit in the ports of the United Kingdom and Continent."

Mr. Nankervis, who seconded, suggested that growers should send their own representative to London to handle the fruit.

The motion was agreed to, as also was one urging a still more effective inspection of fruit for export.

Co-operation.

In an address on Co-operation, Professor Wadham, Director of the School of Agriculture, Melbourne University, said that co-operative purchasing had been a success all over the world. In co-operative marketing there was need for the highest efficiency, which demanded good salaries. A crucial aspect was to study market requirements and prevent gluts, and that there should be no inferiority of article. Some of the finest achievements in marketing were by co-operation, but idealists might lead them astray.

In answer to questions, Professor Wadham stated that a hopeless catastrophe had forced the Danish producers to organise.

American Co-operatives.—Agreements were made with growers for three and five year periods, but growers could withdraw any year by notifying before a stated date. The success of the organisation depended on its efficiency. In America it was not compulsory to join.

Export of Fruit.

In a review of the export season, the Superintendent of Horticulture (Mr. Ward) stated that 924,350 cases Apples had been exported to the end of May, compared with the record of 459,904 cases in 1926, and 81,430 cases Pears against 45,764 cases in 1926. The English and European markets absorbed 906,495 cases Apples. He estimated that the Apples realised £508,392, and that the growers' return was £128,810. Not fewer than 36 varieties were exported, and 21,460 cases were rejected.

Delegates representing the metropolitan section urged that steps should be taken to increase the export of Pears.

Mr. Bailey moved that the Minister of Markets be asked to convene a conference of representatives of State Governments, fruit agents and growers from all States to discuss export problems. He stated that owing to rough handling fruit was bruised before it was exported.

It was explained that an improvement had been effected this year. The motion was agreed to.

Conference adopted resolutions favouring the adoption of the Canadian case for export: and to protest against any increase in the duty on arsenic, although this was opposed because local manufacturers had given an undertaking not to increase the price of arsenate of lead.

Mr. J. B. Brewer, of Burwood, who was for many years the appreciated Secretary of the Victorian Fruitgrowers' Central Association, gave an interesting address regarding the history of that Association, and demonstrated the good that had been accomplished for the industry during the 29 years of the Association's life.

Fruit Council Disbanded.

The unsatisfactory financial position of the Victorian Fruit Council was detailed by the Chairman. The Metropolitan and Northern Associations had paid their affiliation fee of £25; the Central Citrus Association had not joined; the Apple and Pear Growers' Association had paid its affiliation fee, but the money had been largely subscribed by the Executive, who were not willing to continue. A long discussion ensued, and it was freely stated that the advocacy by the Apple and Pear Growers' Association of the Export Control Bill was the reason for the alienation of the growers' support.

Mr. J. W. Bailey said the orchard tax was the only means of improving the organisation. City interests did not desire the efficient organisation of primary producers. Other speakers said there was need for a welfare organisation to guide the general policy of the industry, apart from commercial trading.

The Chairman moved in favour of the amalgamation of the Apple and Pear Growers' Association with the Metropolitan Association. Another suggestion was that the constitution of the Fruitgrowers' Cool Stores Association should be enlarged to embrace other fruitgrowers' associations and to attend to matters of welfare and general policy. The resolution was lost, as was also an amendment that the present organisation continue in skeleton form for a further period to allow reconstruction work to proceed.

Mr. W. Young and Mr. J. McDonald told of the success of the Northern Association, which had an income of £600 from 250 growers. Northern growers received concessions through bulk loading for interstate trading, but the indirect benefits were greater still.

Mr. J. M. Mitchell claimed that the United Berry Fruitgrowers' Association was strong; growers could command what price they asked.

After the motions had been dealt with which disbanded the Fruit Council, the Chairman said the present executive would carry on to clear up the details arising at the Conference.

Cultural Notes for July.

Seasonable Hints on Pruning and Spraying.

(C. G. Savage and W. le Gay Brereton, in N.S.W. "Agricultural Gazette.")

PRUNING can still be carried out on most of our deciduous fruit trees, with the exception of some varieties of stone fruit which start to blossom and shoot very early, such as King Edward VII. and Bell's November Peaches. In the Tableland districts pruning of most of the Apples and Pears can be continued till the end of August. However, it is always advisable to push this work through as fast as possible, for when delayed it interferes with other early spring operations. A free leaflet, "Pruning Deciduous Trees," is available for the asking, although the subject is more exhaustively dealt with in the book, "Pruning," which is now in its eighth edition. This book is also obtainable from the Department, the price being 3/-, postage 3d. extra.

Ploughing.

Where the orchard has had an autumn ploughing, and if the land is still in loose condition and practically free from weeds, ploughing can be delayed till nearer spring. But if it has not received an autumn ploughing or has become compacted again, or if weeds are fairly thick, then ploughing should be completed by the end of the month. Ploughing should also be completed by the end of this month if the land is carrying a green manure crop.

As has been pointed out in previous years in these notes, a green crop must be turned under by the end of July to give it time to rot, and thus make the plant food it has absorbed available again for the trees in early spring. The bacteria which convert organic matter into humus require nitrogen, and very possibly phosphoric acid, in an available form. They cannot function in an acid medium, and in order to aid the formation of humus and to guard against the possibilities of locking up the nitrates and available phosphoric acid already in the soil to too great an extent in the early spring, it is advisable to make light dressings of sulphate of ammonia, superphosphate, and carbonate of lime when ploughing in green crops. If carbonate of lime is not easily procurable, lime should be slaked with water and scattered on the crop some weeks before applying the other fertilisers.

Planting.

Provided the ground is in good condition, planting of deciduous trees, except those that start early, such as the Peaches already mentioned, can be continued this month. Though we prefer early planting, for reasons given in these notes for May, planting of most Apples and Pears can be continued till the end of August in our Tableland districts if the land is in a suitable condition. "Laying-out and Planting an Orchard" is the title of a free leaflet on this subject, and those interested can obtain copies from the N.S.W. Department of Agriculture.

Spraying.

Peach-leaf Curl.—Towards the end of this month, or early next month, Peach and Nectarine trees should be sprayed with lime-sulphur or Bordeaux mixture to control Peach-leaf curl. Some of the very early blossoming varieties, such as already mentioned, should receive this application earlier.

Green Peach Aphis.—Where outbreaks of this pest are expected next spring, Peach and Nectarine trees should be sprayed with miscible spray oil (one to twenty parts of water by volume) at the end of July or during the first two weeks in August. This spray, of course, must be omitted from varieties that blossom earlier than this. Much more detail on the control of this pest will be found in the Department leaflet on green Peach aphis.

San Jose Scale.—In a general way, the Department has found miscible spray oil, diluted one to twenty-five parts of water by volume, and applied at the end of winter before the trees start to shoot, more thorough than lime-sulphur for the control of San Jose scale. But at the same time some growers prefer the latter spray. If lime-sulphur is used for San Jose scale, care should be taken that it is mixed full winter strength and applied as late as possible just before the trees start into growth. It is preferable to use lime-sulphur on Apple trees where the parasite (**Aphelinus mali**) is present for reasons explained later.

Special Treatment for San Jose Scale.

Generally San Jose scale is first observed on a few trees scattered through the orchard, and it is worth while taking special measures to prevent it becoming widespread as follows:—

Prune the affected trees early and place the prunings at once into the lighted burner, taking care when pruning these trees that the pest is not carried to clean trees by the pruner's clothes or pruning tools. The clothes should be washed or thoroughly brushed—not forgetting the hat—and the tools thoroughly cleaned with neat kerosene after completing the pruning of the affected trees and before they are allowed to come in contact with clean trees. The affected trees should then have a soaking application of miscible oil (one to twenty-five parts of water by volume) As a soaking spray when applied to big trees, takes a large quantity of spray, much of which collects in a pool at the butt and is liable to damage the bark at the collar at ground level, it is best, first, to spray the butt, then to throw in soil round the butt, give the tree a soaking spray, and when the job is completed throw the soil which has collected the oil spray away from the butt into the centre of the row. As it is probable that the surrounding trees have a few specks of scale that have not been detected, the whole block of trees, including those which have had special treatment, should receive a normal application of miscible spray oil (one to twenty-five parts of water by volume) at the end of the winter and before they start into growth. With care, orchards in most localities can be kept free of San Jose scale, but once it becomes widespread it is very difficult to eradicate absolutely.

Woolly Aphis.

Fortunately since the introduction of the parasite (**Aphelinus mali**) spraying for this pest has become very much less necessary, but if in places the parasite has failed to keep down the woolly aphis, and it is necessary to check it, tobacco wash or nicotine sulphate should be used. Investigations carried out by the Entomological branch of this Department have shown that neither nicotine nor lime-sulphur sprays kill the wintering **Aphelinus mali**, but that oil sprays kill a large percentage. The leaflets on woolly aphis are available on application to the Under-Secretary.

Citrus Fruits.

Harvesting will occupy most of the citrus-grower's time for the next three or four months. Wall charts and diagrams for packing Oranges designed by Mr. R. J. Benton have recently been issued by the Department, and growers are recommended to write for copies.

Pruning Fruit Trees and Grape Vines

Principles Underlying the Art

(By Geo. Quinn, S. Aust. Govt. Chief Horticultural Instructor.)

Broadcast through 5CL, Adelaide.

IN a country so well endowed by nature for the ready growth of fruit trees and Grape vines as is this portion of Australia, most of the citizens take some interest in this subject.

With the advent of winter and the fall of the leaves, fruitgrowers, both amateurs and professionals, prepare for pruning. They say, in effect, "The time has come to prune; let us go forth to prune." One has only to observe their practices for a brief period to become seized of the fact that no phase of fruit culture appears to present such diversified views and methods of expression as the pruning of trees and vines. Notwithstanding this great variation, however, many fruitgrowers, amongst amateurs as well as commercial orchardists, achieve good results from their forms of procedure.

Pruning is only an art. It represents the accumulated observations of the behaviour of these plants after being subjected to certain reasonably exact operative treatments. These observations have extended over almost indefinite periods of time, and been passed down through almost countless generations of fruit and vine growers. Hence the reason for the anticipation of fair responses from their application into practice.

Pruning, as we know it, has no actual parallel in the natural development of plants. It is, at its best, simply the orderly application of an artificial treatment found by experience to produce in the plants reasonably certain results.

The ultimate result or object is to assist in the production of regular crops of fruit of good quality and in fair quantities throughout a profitable period of years.

The latter proviso implies, therefore, that no very serious interference with the healthy functioning of the tree shall arise from the pruning operations. Fruit-bearing trees and vines will bear fruits whether pruned or not, but their cropping is more erratic and the quality of the fruit soon becomes indifferent where this art is not applied.

Whilst giving the tree a lead towards the production of regular crops of fruit of good quality and in reasonably large quantities throughout its normal lifetime is the ultimate objective of the pruner in the application of his art; this is attained by successive steps which, for want of a better term, we may call preliminary objectives. These may be grouped under three separate headings:—

1. To modify to his purposes the form which its natural habit of growth usually imposes on the plant.

2. To reduce or to stimulate growth as the condition of the tree for the time being demands.

3. To minimise or ward off premature decay arising from various causes.

The foregoing statements may be said to embrace what the pruner sets out to achieve, but alike with every art, when he attempts to translate his theory into practice, there are certain rules or guides for action which cannot be ignored. These guiding rules are founded on observed facts in the growth of plants, and it is by adherence thereto that the art of pruning may be practised on scientific lines. It is very evident that any important departure therefrom must lead to confusion and results of a more haphazard nature.

In modern times, men. trained in natural science have reduced these guiding rules to a few simple and direct propositions, of which the following may be deemed of greatest importance:—

1. The Importance of Foliage to a Tree.

Attention is directed to the maintenance of good health in the plant under treatment by stressing the part played by the foliage of a tree or vine.

Emphasising the fact that the green leaves of a plant practically perform similar functions to those of the lungs and stomach of an animal, they have pointed out that its health and vigour may be gauged by the volume of foliage it carries during the period of active vegetation.

2. Relation of Vigorous Growth to Fruit Production.

Following upon this proposition, it is pointed out that there is in most fruit-bearing plants a direct relationship between the degree of vigour of vegetation—as revealed by the foliage—and the production of fruit. In other words, a very high degree of vigour is seldom conducive to the formation of flower buds or the setting of abundance of fruits. Amongst ordinary kinds of fruit trees,

the Peach

affords practically the only exception to this rule, because it must be kept in a vigorous condition of growth to secure good crops and high quality in the fruit.

In the case of most

fruit trees and vines

which have reached the bearing stage, the cultivator endeavours to maintain a moderate degree of vigour compatible with a state of general good health. This condition is found to result in the more regular formation of flower buds and the setting of fruits. Consequently, it may be assumed that the evidence of strong, moderate, or weak shoot and leaf development is the principal governing factor as to the extent of the pruning to be applied to each tree or vine.

3. Advantages of an Upright and Elevated Position.

Stress is laid upon the advantage for receiving nutriment which accrues to the buds on any shoot which assumed an upright or more elevated position, as compared with others which may be growing in a more pendulous or oblique direction or are situated lower down on the plant. This is merely pointing to a natural law which causes the sap in most plants which develop stiff stems to ascend most freely to the highest points of the topmost shoots. This fact is largely made use of when training plants, whether they be fixed to trellises as is common with Grape vines, or framed as short standards, as adopted here with most of our fruit trees.

The reason why the permanent

arms of Grape vines

are laid in a horizontal position on the trellis wires is because the flow of sap to the fruiting shoots which arise thereon is thereby equalised, instead of rushing to those at the extreme end and causing them to make excessive growth to the detriment of those located nearer to the stem. In general practice, the pruner will utilise this rule to increase or diminish the vigour of any given shoot as the case demands.

4. Effect of Reducing the Branches in Winter.

Another important fact which influences the results following upon the pruning off of shoots during the winter season is that the natural balance which existed between the root system and the portion above ground is disturbed. It should be constantly borne in mind that the extension or decline or the root system and the branch system is a sympathetic one. In other words, they are equal partners in the promotion of the welfare of the tree as a whole, and any injury inflicted upon one is soon reflected in the behaviour of the other. In practice it is found that the reduction of the number of buds by the pruning away of shoots from a normally healthy plant in the winter or dormant season, without any corresponding reduction of the root system, apparently results in a

large volume of crude sap

being sent up in the spring time to those remaining, thus stimulating them to a greater degree individually than would have been the case in an unpruned tree. This effect is utilised when wishing to cause a plant to produce a limited number of stronger growths, as is the case when framing young trees or trying to resuscitate old ones which have become stunted.

5. Effects of Reducing the Root System.

Conversely to the above, attention is drawn to the effect on the plant of reducing the root system. On the one hand, it is commonly noted when a young tree is lifted from the nursery bed, more than half of the root system is severed and left in the ground. If planted into the orchard without a corresponding reduction being made in the branches of the top, such a tree at the return of summer finds itself with an insufficient supply of soil nutrients, and the top must either die back gradually or become stunted until such time as the broken root system is replaced by the growth of new roots. The sap system in trees brought to a stagnant condition of growth by such means as the above, tends to flow sluggishly, and to favour the formation of fruiting wood before the tree has reached anything approaching a desirable size.

On the other hand, fruit trees which display excessive vigour may have their areas of roots curtailed with the direct object of starving them back to that condition of sap flow which favours flower bud formations. This is called root pruning, and is extensively adopted in countries which follow more intense forms of fruit culture than is followed here. In a variable spring and summer climate such as ours, caution must be exercised in reference to this form of pruning.

6. Relation of Numbers of Fruits to Size and Quality.

The last proposition draws attention to the relation of numbers to the size and quality of the fruit borne on trees and vines.

It is a well-known fact amongst fruitgrowers that by reducing the number of fruits either by cutting away some of the potential fruiting branches in the winter, or by the plucking of newly-formed fruits before midsummer, the remainder of the fruits increase individually in size, and usually in quality. Hence, one or both of these forms of pruning may be adopted to increase the quality and quantity of the edible portion of such fruits as those cultivated for their pulp and not for their seeds or kernels.

The practice of pruning is usually grouped under three headings:—

1. Winter pruning, which covers all of those operations performed after the growth has ceased and the shoots become denuded of leaves and quite dormant.

2. Summer pruning includes all of those operations performed from the time of the bursting of the buds in spring until growth ceases in the autumn.

3. Root pruning covers any reduction of the root system, and is usually performed in the autumn or early winter.

Reverting to our discussion on the effects of various prunings applied whilst the plants are dormant, it will be readily noted that within certain limits in respect to trees and vines of normal health and vigour, its immediate influence must tend in the direction of stimulating vigorous growth just in proportion to the amount of top growth removed.

Hence, when the fruit bearing and growth is normal, no drastic increase in the removal of shoots is desirable, or the balance and fruiting habit of the plant will be upset. In the case of vigorous non-fruitful plants, the removal of shoots should be still further restrained at the winter season.

On the other hand, old or exhausted trees which are stunted, their fruits small and, perhaps, over numerous, should be subjected to severe reductions of the tops. The same remark applies to newly-planted trees whose roots have been cut away in transplantation, and to other young trees or vines of which the framework has not yet been fully developed.

Summer pruning

is very desirable in the regulation of the balance of growth on the leading shoots of young trees, as well as to thin out the over density of twigs and foliage which tends to crowd the centres of others which may be a few seasons older. The former usually takes the form of occasionally pinching out the sappy terminal tips of the higher or more vigorous shoots to temporarily check their ascent beyond their less fortunately situated fellows.

Even trees which have attained a good average size for their kind, and still display great vigour, may be steadied down to a slower condition of sap flow by the removal of shoots and foliage, thus allowing the sunlight to enter freely to ripen the smaller shoots and turn them towards the production of flower buds and fruit.

Root pruning is usually a last desperate resort to stunt over-vigorous and non-fruitful trees back to a fruit-bearing condition. It is used when transplanting trees to prevent decay, but then only in the removal of mutilated roots.

Pruning to ward off premature decay has reference more to the procedure to adopt when making wounds, taking care to amputate twigs, limbs, or stumps of limbs in such a manner and position in relation to the healthy shoots or buds retained on the tree or branch that every opportunity is afforded the protecting callus to envelop the cut surfaces with new tissue in the shortest time possible.

HE CANNOT READ HIS TOMBSTONE WHEN HE'S DEAD.

If with pleasure you are viewing any work a man is doing.
If you like him or you love him, tell him now;
Don't withhold your approbation till the parson makes oration,
And he lies with snowy lilies o'er his brow.
For no matter how you shout it he won't really care about it,
He won't know how many teardrops you have shed.
If you think some praise is due him, now's the time to slip it to him,
For he cannot read his tombstone when he's dead.

More than fame and more than money is the comment kind and sunny,
And the hearty, warm approval of a friend;
For it gives to life a savor, and it makes you stronger, braver,
And it gives you heart and spirit to the end.
If he earns your praise—bestow it; if you like him, let him know it;
Let the words of true encouragement be said;
Do not wait till life is over, and he's underneath the clover—
For he cannot read his tombstone when he's dead.

Eminent Scientist Visits Australia.

Soil Fertility Discussed also Alkali in Irrigation Areas.

Views of Sir John Russell of Rothamsted, England.

SIR JOHN RUSSELL, Director of the Rothamsted Experimental Station, England, is an expert on soil and fertilisers, and is visiting this country at the instance of the Council for Scientific and Industrial Research. In order to see for himself the nature of our soil, Sir John, accompanied by officials of the Department of Agriculture and the University School of Agriculture, visited the Werribee Research Farm on June 14th. He expressed appreciation of the work being done there, but thought that there was room for a great deal more intense scientific research to supplement the practical experimental work now being carried on. The week-end was spent in a hurried visit to the irrigation areas, arranged by the Water Supply Commission.

Alkali in Irrigation Areas.

Sir John is keenly interested in the problem of salt or alkali on irrigation settlements. This, he declares, together with the problem of the expansion of cultivation into dry areas, is one of the most vital agricultural questions in the British Empire at present. At the last Imperial Conference, it was suggested that an Imperial Soil Bureau be established at Rothamsted. With this in mind, the soil strata in several cuttings, specially prepared, were investigated, and a few samples taken from each for analysis later. One of the objects of the visit is to see in what way Australian producers can be helped by the scientific discoveries made in England and other British countries, and in what way Australia can be of assistance to them.

Under the auspices of the University Extension Board, Sir John Russell has delivered a series of three lectures in Melbourne on the scientific aspects of the soil and cultivation. The first great triumph of science was its introduction of

artificial fertilisers,

and the greatest triumph has been to bring into cultivation the waste areas of the earth, said Sir John. Sometimes the trouble was lack of plant food, sometimes lack of water, sometimes too much acidity, too much alkali or salt. Remedies were being devised for all of these troubles.

The Rothamsted Experimental Station is responsible for many of the scientific discoveries that are being made to-day. In 1843 one John Bennet Lawes, an English country squire, inherited the ancient manor of Rothamsted, at a time when agriculture in England was in a distressed state. He had either to increase yields on the estate or lose it. A shrewd business man and a keen experimenter with some knowledge of chemistry, he began to try different ways of increasing his staple crop, Turnips. His first attempt was with ground bones, which he knew to contain phosphates. He soon realised, however, that the valuable phosphates could not be consumed by the plant from small particles of bone, and he therefore tried dissolving the bones in sulphuric acid.

Geologists at this time made the discovery of rock phosphates, and as these were cheap, and easily obtainable at Rothamsted, Lawes tried dissolving these in sulphuric acid, and produced the first superphosphate. After analysing the result into its component parts, which he could obtain cheaply in the district, he manufactured it by compounding these elements, and soon decided to set up a factory for its manufacture in London. The first advertisement for superphosphate appeared in the "Gardeners' Chronicle" on July 1st, 1843. In this way Lawes amassed a small fortune.

In order to continue and develop the many experiments he had in mind, Lawes enlisted the help of Joseph Henry Gilbert. It was indeed a good thing for the success of the enterprise that this was done, for, although Lawes had a broad vision and a good general conception of his work, he lacked that very capacity for detail which Gilbert possessed in a marked degree. The sixty years' scientific partnership of these two men was thus doubly fruitful because of the happy combination of these important characteristics.

The first laboratory,

in which the superphosphate was first made, was remarkably crude, and in order to follow up the discovery valuable laboratories were built. The results of the superphosphate experiment were tested on the Broadbalks wheat field, planted in the year 1843, and still used. At first the farmers of England refused to believe in the permanent benefit which it was claimed would come from the use of the fertiliser. They declared that in time the soil would become sour and the crop ruined. Time has shown that they were wrong.

This discovery was only the first of a long series of great importance, and at the present time experiments are being conducted at Rothamsted in the **manufacture of farm manure without the intervention of the animal.** The same organisms are supplied to straw, and the results, while not yet perfect, come within 1 per cent. of perfection.

The earth is teeming with minute organisms. The only particle of soil examined at Rothamsted which has not contained a living organism was a grain of dust taken from the tomb of King Tutankamen. Sand from the desert and soil from the Arctic regions and every corner of the globe has been tested, and many interesting, and often beautiful, organisms found. The population of

organisms in the soil

is always changing, but as soon as one group dies another is there to take its place. This part of the work at Rothamsted is as yet in its infancy.

While scientists are seeking general knowledge on this subject, another group of men is endeavouring to put theories and results to practical and economical use. It was found that heat affected the organisms of the soil.

Steam was applied

to soil apparently exhausted, and good results were obtained. Then a sample of the same soil was treated with a heat-producing chemical, with far better results. Sir John emphasised the need for a keen group of scientists to formulate principles, on which experimenters would then work in order to find practical uses for these. He also stated that some department for agricultural statistics was essential so that all results of experiments could be formulated and the most made of them.

Australia is a country of great possibilities and great difficulties.

Professor Wadham, in seconding the vote of thanks, moved by Dr. Cameron, stated that there was a chance of a soil department being established in connection with the University School of Agriculture. He was sure that every branch of agriculture would benefit if this could be secured. The visit of Sir John Russell had made us realise what an important element the soil is, and should be an inspiration and an incentive to extensive effort in this country.

Sir John Russell is visiting Tasmania, and leaves Melbourne again by aeroplane for Griffith, in New South Wales, on July 3rd.

N.S.W. FRUITGROWERS' FEDERATION.

Annual Conference.

Important Decisions.

BRIGADIER-GENERAL HEANE, President of the N.S.W. Fruitgrowers' Federation, in his address at the Annual Conference held in Sydney recently, said the Sydney civic authorities seemed determined to drive out the barrowmen from the streets, despite the assurance of the Commissioners that they would be allowed to remain, and had, moreover, granted 25 additional licenses.

If the barrowmen are got rid of, continued the President, a normal fruit year will be turned into a glut. The civic authorities are looking at the position from a wrong point of view. The city does not live on itself —it lives on the country, and the Federation should take political action to ensure the continuance of the street sales. The barrowmen were selling fruit of a quality that was to be had in the best shops.

The Minister for Agriculture (Mr. Thorby), who opened the Conference, said he had just returned from an extensive tour of the various States with Mr. Savage, who had succeeded Mr. Allen in the Department of Agriculture. It was obvious that there was a lack of organisation in some districts. An amendment to the Farm Produce Agents Act would be introduced next session in order to get better conditions in the metropolitan area. Evasions of the provisions of the Act were taking place. There were many loopholes in the Act that would have to be sealed up. He hoped a uniform size of case would be adopted in every State.

As a result of considerable discussion, Conference urged the creation of a Commission, consisting of the growers, distributors, and the Government, to go into the matter of remodelling the markets, and a motion was carried "That agents' cases were the main cause of congestion at the markets, and should be cleared away every three days." With but one dissentient, conference decided that the time was not yet opportune for installing the system of selling cases with the fruit.

Delegates were against Government control of the industry, and also against Government taking over existing distributing centres.

A motion that representations be made to have the Farm Produce Agents Act, amended by increasing the £500 bond demanded from agents, to £1,000, was carried.

The constitution had further added to it a provision to allow any group of agents to furnish a joint bond for £10,000.

A proposal that the Government should be asked to compel all agents and merchants to be registered—was adopted.

A motion that the minimum rates of selling commission of 4d. per half-case, and 6d. per case, be eliminated, and a rate of 7½ per cent. be fixed with minimum or maximum—was defeated.

The conference appointed a special committee of five to make a comprehensive review of the method of marketing and distribution of fruit in N.S.W. The committee will make suggestions by which methods may be improved, so that a fair and reasonable return shall be assured growers, and plans be made for facilitating distribution and lessening the cost as between producer and consumer.

The members elected to the committee were:—Messrs. H. G. Such, H. V. Smith, A. E. Herring, J. W. Blick, and H. S. Wark.

It was also decided to ask the Minister for Trade and Customs to convene a meeting of interstate fruitgrowers, to consider the quotas to supply the interstate markets.

It was decided to urge on the Government the desirability of giving substantial aid to cool store industry by a reasonable method of finance, such as guaranteeing advances to approved projects.

The opinion was expressed by the board that cool stores were a necessity, and as the facilities in Sydney were inadequate, recommends that the Commissioners increase the space available.

It was agreed that the Department of Agriculture be asked to carry out the work of making tree performance records in each district in which an inspector is stationed, such records to be taken over a period of three years. Records to be taken from blocks of not less than 50 trees in full bearing.

A proposal to levy a farthing per case on all fruit in order to provide funds for publicity was carried unanimously.

Members of the board for the ensuing year were elected as follows:—Messrs. R. Lowe (Lower Portland), A. F. Dunstan (Sackville Reach), H. G. Such (Griffith), F. Helson (Leeton), W. W. Challis (Kentucky), A. J. Taylor (Singleton), H. S. Wark (Bathurst), A. V. Tonking (Orange), R. Hill (Narara), T. C. Morrison (Gosford), A. T. Tester (Young), J. Bran (Lavington).

Brigadier-General J. Heane was re-elected President.

Mr. Clapp's Address.

What can be done for the primary producer by organised effort and co-operation with the public utilities was explained by Mr. Clapp, Chief Commissioner, Victorian Railways, who went to Sydney specially to attend the conference.

Mr. Clapp said an "eat more fruit" conscience had been built up in Victoria by propaganda work, and the consumption of fruit had increased enormously. So successful was it, that California, South Africa, and New Zealand had copied the scheme.

More than £18,000,000 had been sunk in the fruit industry, and when the Victorian Railways first took an interest in it, 2,800,000 cases of the fruit were sold annually. Sales had now increased to 4,000,000 cases a year.

In 1922 the sale of canned fruit was 6,000,000 tins. To-day it was 20,000,000 tins. There was some talk of the railways interfering with private enterprise, but it had since been realised that the work of the railways had benefited the industry all round.

The total sales of all fruit sold and used by the railways represented a money value of £52,849 last year. For the nine months ending March of this year, the value was £63,177. There was no surplus of citrus fruits in Victoria now, nor is there likely to be for many years to come.

TO PROTECT FRUIT TREES FROM WHITE ANTS.

When cleaning land for orchards or vineyards, great care should be exercised to remove all stumps and roots from the ground (states the Department of Agriculture, N.S.W.). Any white ants' nests in the vicinity should be destroyed. When trees become infested, cut out the damaged wood if possible. Avoid scarring the trees near the base, as these scars are likely to induce white ant attack. Dead or dying infested trees should be removed and burnt. Where the roots are attacked the use of paradichlorobenzine or some other fumigant is suggested. This will destroy the white ants attacking the roots and in the adjacent soil, and will act for a time as a preventive.

To apply the paradichlor, dig a circular trench 3 to 4 inches deep at a distance of 6 inches from the trunk of the tree, and scatter 2 ounces of the fumigant on the bottom of this, afterwards filling in with soil. The fumigant is more active when the soil is warm than when it is cold, and is not effective when the soil is saturated with water. For young trees a dose of 1 ounce is sufficient. If necessary, the treatment should be repeated.

IMPERIAL ECONOMIC COMMITTEE.

Important Work to Assist Australian, New Zealand, and All Empire Producers.

THE IMPERIAL ECONOMIC COMMITTEE has presented its eighth report. Since the appointment of the Committee in 1925, its scope has been widened, and much has been done to promote the interests of the overseas Dominions.

The report just issued, besides throwing light on the actual work of the Committee, sets out clearly and succinctly the distinction between the work and objects of the Committee and those of the Empire Marketing Board.

The ultimate object of both is the same—to foster an increased consumption of Empire products in Great Britain, and to assist measures, especially those in the field of co-ordinated research, towards that end.

In constitution, methods of work and duties, however, the two bodies are entirely different. The Imperial Economic Committee derives its authority from the Imperial Conferences, and can only investigate subjects remitted to it with the consent of all the Governments of the Empire. The Committee has a fixed authority, whereby each Government participating in Imperial Conferences nominates its own representatives, and is charged solely with the duty of investigation and report. Each Government can decide as to what extent it will give effect to the Committee's recommendations.

The Empire Marketing Board is entrusted with funds and executive powers to further the marketing of Empire products from home and overseas in the United Kingdom. The Board is thus an executive organisation, responsible to His Majesty's Government, whilst the Imperial Economic Committee is an Imperial Council, reporting to all the Prime Ministers of the Empire on the economic subjects referred to it.

Representative as it is of all parts of the Empire, it should be able to bring to the consideration of its subjects the experience and knowledge of all parts to be thrown into a common pool not for the advantage of any one particular part of the Empire, but for the benefit of all, for the improvement in the preparation and marketing of Empire products, and especially for and in the markets of the United Kingdom.

By purchasing goods produced in the Empire, in preference to foreign, says the report, it is in the power of the people of the Old Country to offer an increased market for Empire produce. Three things were necessary to render this preference effective:—

(1) That the consumer should be induced to select Empire goods.

(2) That he or she should be able to recognise Empire goods.

(3) That Empire goods should be adequate in supply and quality, and reasonable in price.

BUD SELECTION.

Mr. A. D. Shamel Should be Invited to Visit Australia.

THE suggestion made in our last issue that Mr. A. D. Shamel, the noted plant physiologist of the United States Department of Agriculture, be invited to come to Australia for a period, has met with wide approval. Mr. Shamel's work on bud selection has assumed world-wide significance. The principle of improvement by bud selection, so ably demonstrated by Mr. Shamel and his associates, has been put effectively into practice in uplifting the citrus industry in the United States and in other parts of the world. The natural principle of bud selection applies with equal force to all other fruits. The adoption of this principle in propagating from the best strains of true-to-type Pineapples saved the Pineapple industry in the Hawaiian Islands from extinction. Mr. Shamel's service in this connection was of untold worth. Similarly his work with sugar-cane and Bananas has been equally meritorious. Mr. Shamel's services are now being sought for the improvement of Peach varieties, and some valued work has already been done in discovering and classifying sports from the best varieties of Peaches for canning.

One of the most outstanding needs in relation to the fruit industry in Australia is that the cost of production should be reduced. It would be a good step forward if each tree in the orchard could be made to produce the right variety to its full capacity.

Growers of all classes of fruit, as well as nurserymen, would benefit if, in the laying down of a programme of this technical character, the services of such a world-famed expert as Mr. Shamel could be made available. Not only could he indicate the best lines for the work in this country to proceed along, based on the experience of a lifetime, but he would be able to convince the older generation of growers of the soundness of the programme, and would inspire the younger generation with new ideals as to the possibility of co-operating with Nature in type improvement.

ARE APPLE-GROWERS DISORGANISED?

THE WINDING-UP of the Victorian Fruit Council, regrettable as it may seem at the first glance, need not be taken as a gesture of despair in relation to the organisation of Victorian fruit-growers.

As a matter of fact, the various sections of the industry have been, and are still, steadily at work in organising their individual sections. These organisations, representing the citrus growers, canning fruit growers, metropolitan growers, and berry growers, are all functioning. The failure of the Council to function as a whole to speak on matters of general welfare and policy was largely because of the failure of the Apple and Pear Growers' Association to make good; for the latter event the advocacy of the Export Control Board was the main contributing factor.

There are sincere men who still believe the Export Control Bill to be desirable, and there are equally sincere men who believe it would be a calamity, and the latter appear to be in the majority. However, as a speaker at the Conference said, there was more heat engendered in the Export Control discussions than was warranted. Men can disagree firmly, but pleasantly, and it was hoped that an Association would be formed on broad lines without the likelihood of a split on contentious subjects.

But are the Apple and Pear growers so poorly organised as might be supposed from some recent press reports? We think not. In the first place, the distinction must be drawn between

(1) Associations for general welfare and policy, and

(2) Those for commercial trading.

By means of the Fruitgrowers' Cool Stores Association growers of Apples and Pears are doing some effective work in the better distribution of fruit, and they have the keenest interest in matters relating to grading, packing, pest control, export, better storage facilities, and also welfare matters affecting the industry.

The existence of the Fruitgrowers' Cool Stores Association rightly presupposes the existence of cool stores in individual districts. So good work has been going on there.

Then, again, we notice that in the principal districts the growers are organising into packing-house associations, and into groups for the establishment of district brands for the local, interstate, and export trade.

In exporting from Victoria the record quantity of 1,000,000 bushels of fruit for the U.K. and Europe, the work was carried through expeditiously and with credit to all concerned. The chairman of the recent Fruitgrowers' Conference thanked the Railway Department, the Port Authorities and the Exporters' Handling Committee for their services. So the statement that Apple-growers are unorganised lacks justification.

It is certainly desirable there should be a State-wide Association of fruitgrowers to deal with large matters of policy. This will come when the various sections have made further progress in their own particular spheres.

By progressively attending to detail matters close at hand, and exercising tolerance with all, it will surely be found that larger opportunities will be presented, and in the acceptance of such opportunities will the industry continue to progress.

AUSTRALIA'S APPLE PRODUCTION FOR 1928.

Estimated at 9,000,000 Bushel Cases.

Speaking before a dinner tended by Mr. H. G. Colombie to Apple growers and exporters on June 18. Mr. Paterson, the Minister for Markets, stated that the usual production of Australian Apples was 6,000,000 cases. This year the production was 9,000,000 cases, a record for Australia. Of this quantity, 4,500,000 bushels had been exported. Three million cases were sent to Great Britain, and the balance to continental and other ports. The exports from the various States were as follows:—Tasmania, 2,500,000; Victoria, 1,000,000; South Australia, 500,000; Western Australia, in spite of the thrips, which attacked that State this year, 200,000. He stressed the necessity for sending more fruit to other ports of England. Larger shipments should be sent to such ports as Glasgow, Liverpool, Manchester, Hull, and other ports on the Continent of Europe.

Mr. Paterson referred to the work which was being undertaken by the Council for Scientific and Industrial Research in regard to plants and insect pests. This would be of particular value to orchardists.

In order to advertise Australian products in Great Britain more widely the Federal Government had allocated a sum of £7,500 towards this work during the present year.

The Minister further stated that he was not wedded to the Export Control Board if other methods of co-operation were satisfactory.

NEXT SEASON'S APPLES.

Can Crop be Regulated?

Enquirer, Ringwood, asks: How can I assist my Apple trees to bear a crop next season? As you know, this season's crop has been a most prolific one, so that in all probability the trees will require every assistance if they are to set a crop next season.

Answer (by Geo. Quinn, S. Aust. Chief Horticultural Instructor).—As most experienced growers are aware, it is seldom that Apple trees can, at the same time as they bear a heavy crop, store up sufficient reserve nutriment to mature their flower buds to ensure a crop in the succeeding season.

I do not think any experimental work has been done which shows that any manurial treatment at this late stage will effect this result. I think all one can hope for in the season following a very heavy crop is to obtain a fair sprinkling of fruit, and then only when the trees have been kept in good heart by the application of fertilisers, and the following of good methods of soil management generally.

I certainly do not advise heavy removals of wood by winter pruning during the dormant season preceding an expected light crop. Any pruning should, in my opinion, be confined to thinning out any densely spurred areas on the trees, but nothing of the nature of a stimulus given to wood growth when there will be a few Apples only carried to steady that spur of growth.

Do the heavy cutting in the winter when a good to heavy crop may be expected, so that it will act as a check against too rampant a growth which otherwise may be calculated to upset the fruiting habits of a tree of normal vitality.

This remark applies more particularly to those kinds of fruit trees which fruit on spurs, such as the Apple, Pear and Plum.

Mr. P. Val Kerr, of Tyabb, Vic., gives his views as follows:—I suggest that where the trees are carrying few fruit buds, a large number of yearling laterals having fruit buds at their terminals be left unpruned. Particular attention should be paid to the provision of ample varieties for cross-fertilisation. In some cases (with biennial fruiting varieties), the whole of the trees cropped last season, and where these sorts are being used for fertilising, it may be necessary to provide from other kinds for the purpose.

CHARGES ON SALE OF AUSTRALIAN APPLES OVERSEAS.

The Editor, "Fruit World," Melbourne.

Dear Sir,—A circular letter addressed by a Melbourne firm acting as agent for private treaty salesmen overseas, and sent to exporting Applegrowers, has been shown to me by several interested growers, who have asked me for an explanation.

The circular letter in question makes the statement, "inter-alia," that:—

"Most of the larger auction selling firms in England have increased their landing charges by 2d. per case."

From press reports, it would seem that this matter was also discussed by fruitgrowers at yesterday's conference.

I do not know with what knowledge, and on whose authority, this unwarranted statement was made, and my object in addressing you is to request that you be good enough to insert this letter in your next issue, with my definite intimation that the above statement is absolutely without foundation so far as my own principals are concerned, all of whom are amongst the leading and most important fruit brokers selling at auction overseas. I am generally well informed in all matters pertaining to our industry, and can go further by saying that I have no knowledge that any of the English fruit brokers selling at auction have increased their charges.

As the general Australasian representative of the firms whose names appear on this letter-heading, I make the unqualified statement, that we have this year made no change whatsoever in our charges.

Yours faithfully,

H. G. COLOMBIE.

Melbourne, 2/6/28.

New South Wales

Organisation - Bud Selection - Canning Fruits

A further accession to the ranks of the organised growers of Citrus in New South Wales is the Yanco Producers' Rural Co-operative Society Ltd., Yanco, states Mr. H. G. Such, Manager of the Central Citrus Association (N.S.W.) Co-op. Ltd. The members are mainly soldier settlers, who were put on the land under the New South Wales Repatriation scheme. As this district grows Citrus in large quantities, having about 1,000 acres planted, the company has joined the Central Citrus Association of New South Wales as an active member, and will this season be operating, packing and marketing their fruit under the "Sunbright" brand.

Bud Selection.—A further step has been taken in the direction of getting bud selection under way in New South Wales, by the formation of a company, registered under the Co-operation, Community Settlement and Credit Acts, called the **Co-operative Bud-Selection Society Ltd.** The objects of this Society are to carry on the necessary trading required in connection with the buying, selecting and selling of buds to authorised nurserymen. The members are those nominated by the Central Citrus Association, Fruitgrowers' Federation of New South Wales, and the Nurserymen's Association, and include Mr. H. Robinson, General J. Heane, Mr. H. G. Such, Mr. W. Ritchie, Mr. C. W. Rosen, and Mr. Thomas Adamson; the Secretary is Mr. E. E. Herrod.

The scheme proposed is that the buds should be purchased from the growers at certain fixed rates, and sold to the nurserymen at a higher rate, the difference being calculated to pay the actual cost of conducting the work.

An application has been made to the Minister for Agriculture to authorise an advance of £250, from the Orchard Registration Fund, to permit of the initial work being carried on.

Sydney Market for Citrus.—Large supplies are now coming forward from nearly all districts, and opening prices are not very encouraging. The fruit this season appears to be of high quality, clean, and well developed. Owing to the excellent growing season, the flavour is greatly improved over last year's, and it is hoped that the public demand will accord with the increase in the crop which is to come forward.

The unfortunate shipping hold-up is naturally having its effect on the position, and large buyers are holding off the market. The demand for New Zealand is not large, in view of the fact that most of the Oranges for that country are now being shipped direct by the packing houses, including the Central Citrus Association, as a result of the recent visit of their representative to N.Z.

Canning Fruits.—After the disastrous year just past, growers of intermediate varieties of Peaches are beginning to pull out the trees, and it appears likely that on the Irrigation Area, only main crop varieties will be left in. A recent announcement was made by the Irrigation Commissioners, to the effect that only 1,900 tons of Peaches, and 500 tons of Apricots would be canned at the Leeton factory. Negotiations are now proceeding with regard to the balance, with the various factories in this city. It appears quite probable that, after the heavy crop last year, there will not be so much fruit available, and it is reasonable to anticipate that the factories will be able to consume the great bulk of it.

MOVE TO STOP STREET SALES.

There is strong opposition to the suggested removal of fruit stands and barrows in Sydney by the civic authorities. Those interested in the fruit industry consider the attitude of the authorities to be grossly unfair, in singling out fruit stands, when congestion of traffic is put forward as a reason for this drastic move, particularly when the parking of cars in the city streets is considered.

Attention is being called to the high rents of city shops, which make it impossible for the sale of fruit to be carried on without the aid of many sidelines, such as sweets, tobacco and cigarettes, and soft drinks.

It is also pointed out that it was by means of stands and barrows that the biggest fruit glut in the history of Sydney was handled this year. The barrowmen saved the situation by handling huge quantities of fruit with surprising ease.

If the proposed action by the Sydney civic authorities is carried into effect, it will affect growers all over Australia, for large quantities of interstate fruit are sold in the streets of Sydney.

RELIEVING SYDNEY MARKET.

New Channels of Trade.

Advertising is Beneficial.

The Fruit Glut Conference, which was inaugurated here some few weeks ago, has appointed a committee, comprising the Director of Marketing and a representative of each of the following:—Fruitgrowers' Federation, Central Citrus Association Ltd., Fruit and Vegetable Agents' Association, Wholesale Fruit Merchants, Producers' Distributing Society, and the Housewives' Association.

This Committee meets weekly, and is very active in following out ways and means of increasing the consumption of fruit. It has secured the approval of the Police Department for the placing of an additional number of street stalls in the city and more thickly populated suburban centres, and is endeavouring now to make suitable arrangements with the Civic Commissioners, with a view to finalising this portion of its plans.

The aid of the Railway Commissioners is also being sought, and, in addition, an effort is being made to complete some properly organised means of making regular supplies of fruit available to children of the public schools.

It is estimated that the publicity given the prevailing fruit glut by the activities of the "Fruit Glut Conference" has resulted in about 400,000 cases of Tasmanian fruit being diverted to the overseas market.

To date the wholesale fruit merchants have every reason to be pleased with the results derived from the advertising campaign which they inaugurated recently. Three weeks' advertising has been the means of selling over 1,000 cases of Apples. It is the intention to carry out a similar campaign of direct selling to the public by means of advertising in connection with Oranges.

BUNCHY TOP IN BANANAS.

Aphis the Cause.

South Arm, N.S.W., Fruitgrowers' Association recently passed a resolution "That the Government make a definite statement at an early date regarding the planting of Bananas next spring."

A further resolution was carried, "That permission should be granted to remove suckers for planting purposes from young, well-controlled plantations within the zone of the recommendation of the inspector."

Mr. Allan Fitzpatrick, inspector, told the meeting that not many growers in the No. 4 zone doubted the aphis theory as the cause of "bunchy top." Twenty experiments had been carried out, and every plant on which infected aphides were placed, developed the disease within 28 or 29 days. Plants on which healthy aphides had been placed, lasted 4½ months. A striking instance on the Lower Tweed showed the correctness of the aphis theory. In one plantation where the aphis was controlled, there was only one per cent. of "bunchy top." On an adjoining plantation, where the aphis had been neglected, the disease was rife. He emphasised the necescity of spraying infected plants before disturbing them.

Digging out infected plants was too expensive. He and others had found that out to their cost. A record, continued the inspector, must be kept of every plant in the district, and for that return, every single Banana tree must be registered.

Owners of unregistered plants rendered themselves liable to prosecution. Although this regulation had been in operation for many months, there were still many owners who had not complied with it. To ensure success, plantations will have to be cleaned up thoroughly.

"COMPULSORY CO-OPERATION" OPPOSED.

Plain Speaking at Griffith, N.S.W.

Difficulties of Canned Fruit Position Faced.

Bright Outlook for Citrus.

The shareholders of the Griffith (N.S.W.) Producers' Co-operative Company, are firm in their stand against "compulsory" co-operation. It is reported in "The Area News," which circulates in the Murrumbidgee irrigation areas, that Mr. Wilson Moses, the general manager of the Producers' Company, declared his intention of "opposing compulsory co-operation to the end of time." This statement brought much applause. At the annual re-union of the shareholders Mr. Moses said that most canning fruitgrowers had a difficult time last season. The outlook on the area was not so bad as at Leeton and in some parts of Victoria.

In some areas the only solution seemed to be the ripping out of the young trees before they came into bearing.

Every ton of Peaches canned last year showed a loss of £9. It was better to face the issue now than to ask the Government to continue the bounty for seven years to meet the losses on export. The position must be faced fairly and squarely as it was to-day. Mr. Moses, in putting the very worst case before the producers, **prophesised that the Leeton factory would have to go, as no Government could continue to meet the tremendous losses."** He reminded the growers of their experience in 1921, when in a desperate effort to cut its losses on the canning pool the Federal Government had drastically cut the price of canned goods. In Griffith, he added, there was an independent public opinion, and at the Bathurst Conference the committee on which the producers were represented was the only one which did not ask assistance from the Government. Mr. Moses expressed his opposition to the Marketing Bill as amended by the Government. In its original form it gave too much power to the Government nominees, and as amended, gave the whole control to the producers, who thereby were encouraged to believe they could find a solution to their troubles by means of compulsory pools and other forms of legislation.

In actual fact, no unsound economic position could be righted by any measure of control.

One hundred per cent. control was not the ideal of co-operative enterprise, for that would remove the incentive of competition. There should be a sufficient margin of competition to guarantee efficient and economical management. The influence of the Marketing Act could only be to foster and encourage that unfortunate tendency in Australia to look to legislation to remove difficulties. The solution lay with the growers, through voluntary co-operative effort in the marketing field, and in the reducing of the cost of production by individual growers.

Mr. Vagg, manager of the packing shed, gave hope of brighter prospects in the citrus industry. The crop would be larger this year, and an innovation in marketing was intended. Sizes would be pooled as well as quality, and separately, so that growers delivering out-size fruit would not benefit by the commercial sizes delivered by other growers, and vice versa. Mr. Vagg also urged the adoption of a standardised pack of dried fruits, declaring that it was this feature that put the American product in its present high position. He appealed for better packing methods for dried fruits.

We acknowledge having received from Mr. H. G. Colombie details of cabled prices sent by Messrs. MacGeorge and Jardine, Liverpool; B. and J. Shaw, Hull; W. Isaacs and Sons Ltd., London; Kobenhavns Frugtauktioner, Copenhagen.

CORRECTION.

In reporting last issue the speech of Mr. H. W. Clapp, Chief Victorian Railway Commissioner, at the recent Citrus Growers' Conference, an error was made in stating that the Australian consumption of canned fruits was 20,000 tins a year. The figure should have read, of course, 20,000,000 tins.

Tasmania.

THE OVERSEAS FRUIT EXPORT season will soon be closed. At the time of writing, there are still five more steamers to call at Hobart to load for European markets, making a total of 48 vessels visiting the port for Apple and Pear cargoes.

The complete export figures up to mid-June are as follows:—

Overseas.—From Hobart, 2,206,573 cases; from Beauty Point, 389,078 cases. Interstate.—From all ports, 679,759.

It is estimated that approximately 200,000 cases of fruit are still to come forward to be shipped overseas from Hobart, so the total for the season from Tasmania should be in the vicinity of 2,800,000 cases.

South American Shipments.

In connection with the proposed export of Apples to South America, it has now been definitely arranged for the Commonwealth and Dominion steamer "Port Denison" to call at Hobart to load fruit for South American ports.

This will be the first time that fruit has been exported to South America since the year 1915, and may open the way for further exploitation of this market, although the Port Denison will be the only vessel to lift fruit for there this year.

The total quantity shipped will approximate 14,000 cases, the fruit being consigned to Monte Video and Buenos Aires.

The New Parliament.

The recent elections have resulted in the return of a Nationalist Government, the poll being generally larger than any preceding contest.

Fruitgrowers throughout Tasmania will congratulate Mr. B. J. Pearsall, the Chairman of the Fruit Advisory Board, on his election for Franklin. His success now gives the fruit industry four direct representatives in Parliament. Mr. Neil Campbell and Mr. J. P. Piggott were also returned with substantial majorities in their respective electorates of Wilmot and Franklin, whilst Mr. W. H. Calvert occupies a seat in the Legislative Assembly. The four representatives are also members of the State Fruit Advisory Board.

Dried Fruit Department

DEHYDRATION OF FRUIT.

A New Process.

A new process for dehydration of fruit was described by Mr. B. F. Hulze, of Los Angeles, California, who visited Australia recently. Mr. Hulze attended the Garden Week display at Melbourne, for which he expressed keen appreciation.

The air is super-heated to 220 degrees Fahrenheit, and the oxygen is burnt up, and when drawn across the fruit the moisture between the cells is removed. The vitamines are not killed; in other words, the fruit is "cured."

The system is really that of using hot air in which there is no free oxygen.

Dehydration plants on the new principle have been installed in California, and are reported to be operating successfully; the process being better and cheaper than open-air drying.

ADVERTISING DRIED FRUITS.

A new method of publicity is to be tried by the Victorian Dried Fruits Board. A film is being prepared, which will illustrate scenes in the vineyards, the processing and packing of the fruit. The film will also contain propaganda embracing the food values of dried fruits and the many ways of utilising it. The board has also completed arrangements for the display of posters in shops, trams, trains, and hoardings.

Advertisements featuring dried fruits recipes are also to be featured on the woman's pages of the daily press.

NEW PACKING SHED AT MILDURA.

The new packing shed erected by the Mildura Co-operative Fruit Co. Ltd. proved to be satisfactory in every way during the season just concluded. The new building is of concrete and steel, and affords storage for 4,000 tons of fruit. The main packing shed is 250 feet long by 100 feet wide, and is considered to be the most modern and complete dried fruits packing shed in Australia.

The machinery installed for cleaning, grading and packing the fruit is new throughout, and consists of a Brockhouse 60-ton dual blast stemmer and grader, a Showell blender for blending the fruit, automatic feeder, and the usual elevators and all steel packing hoppers, steam presses and five nailing machines for making and lidding boxes.

The whole plant is electrically driven from power supplied by the municipal generating plant, and all the latest dust control appliances have been installed.

WEST AUSTRALIAN WINE.

Record Vintage.

The wine yield of Western Australia for this year is expected by the State Government Viticulturist to reach 350,000 gallons, or 60,000 gallons more than last year's record production.

DRIED FRUITS.

Record Sales in Britain.

From the total quantity of 35,092 tons of Australian dried fruits shipped during last season to Great Britain, 27,021 tons have been sold, including all the currants and lexias, and 20.166 tons of sultanas, the average price of which was £58 a ton. In view of the fact that the shipments of sultanas to the United Kingdom last season amounted to the record figure of 28.312 tons, as against 11,390 tons in 1926-27, and 12.980 tons in 1925-26. the sales of 20,166 tons recorded against last season's shipments compares more than favourably with the total of 11,101 tons sold at the corresponding period last year, and 12.363 tons at the same date in 1926.

The carry-over of Australian sultanas in Great Britain now amounts to about 8,000 tons, and in view of the light crop this year, which unfortunately is not generally of the same high quality as in 1927, the 8,000 tons remaining from last year will assist materially in making available the steady supply of sultanas to the British market.

DRIED FRUIT SALES.

Sales of Australian dried fruits in Great Britain recorded with the London agency of the Dried Fruits Control Board for the week ended May 17. represented:—Sultanas. 254 tons, at an average price of £55/5/5 per ton.

The total realisation of last season's fruit in Great Britain is:—Sultanas, 19,956 tons, at an average price of £58 per ton; Currants, 4,809 tons, at an average price of £42/11/- per ton; Lexias, 2,046 tons, at an average price of £43/10/3 per ton.

TREE INJECTIONS FOR INSECT PESTS AND FUNGUS DISEASES.

Woolly Aphis Effectively Defeated.

A New German Method.

An unique method of treating trees affected by disease has been adopted by Herr Walter Jlisch, garden architect, of Hanover, Germany. In a booklet issued, a copy of which was sent to "The Fruit World," Herr Jlisch sets out the advantages of tree injection, as practised by him, for treating diseased trees.

His method is to bore a hole in the tree trunk, with a slight slope downwards. A tube is inserted in the hole, and the "medicine" prescribed by Herr Jlish is poured into the tube and absorbed by the tree. This treatment is continued until the full amount of "medicine" prescribed has been used up. The hole in the tree is then corked up.

In 1920 Herr Jlish started theoretically with the possibility of injecting trees, and the following year put his theory into practice with considerable success. The fame of his treatment has spread through Europe, and the issue of his booklet will bring his treatment under notice in other parts of the world.

By introducing the remedy into the sap of the tree, the whole tree is affected, and the remedy will have its effect on the parasites wherever they may be.

Among the diseases treated are:—Woolly aphis, plant louse, shield louse (cochineal or diaspis), phylloxera. Agaric diseases, such as Monilia Fructigena and Taphrina (curly disease) on stone fruits, etc.

A tree covered with woolly aphis was free of disease within a week after treatment, and the fruit was in no way adversely affected. On the contrary, the treatment proved that fruit was improved.

A tree heavily invaded with woolly aphis was treated and cured in a week. In order to try whether the tree had become insusceptible, some colonies of woolly aphis lice were put on the tree. The result was disastrous to the pest.

A tree covered with caterpillars was injected. The caterpillars, feeding on the leaves, took considerably longer to destroy. This proved that the sucking insects were more susceptible to the treatment.

PERSONAL.

Congratulations to Mr. B. J. Pearsall, M.H.A., Chairman of the Tasmanian Fruit Advisory Board, on his election to Tasmanian Parliament. Congratulations also to Mr. Neil Campbell, M.H.A., and Mr. J. J. Piggott, M.H.A., on their re-election. Mr. W. H. Calvert, M.L.C., has a seat on the Legislative Council. Tasmania is thus well represented in Parliament. All the afore-mentioned are members of the State Fruit Advisory Board.

Sympathy is expressed for Mr. J. H. Houfe, of Tyabb, in his illness. Mr. Houfe is Secretary of the Tyabb Cool Stores. For many years he was Secretary of the local fruitgrowers' Association. His unfailing courtesy in attending to the interests of fruitgrowers is widely appreciated.

MR. C. C. BRITTLEBANK.

Victorian Government Biologist's Term Extended.

The State Ministry has decided to further extend the term of service of the Government Biologist (Mr. C. C. Brittlebank). Mr. Brittlebank was originally due to retire on December 31st, 1927, but the Ministry, yielding to the representations of the various bodies interested in plant culture, decided to extend the term for an additional six months. This has now been further extended to December, 1928.

News in Brief.

COMPULSORY ARBITRATION FAILURE.

British Statesman's Conversion.

Views of Sir Robert Horne, M.P.

Speaking at a meeting of the Economic League in England recently, Sir Robert Horne, M.P., who was recently in Australia, confessed that he was once a strong supporter of compulsory arbitration. "But when I visited Australia," he added, "I discovered that arbitration had not rid Australia of strikes. Arbitration is a failure, because it always keeps the two sides in a fighting attitude."

THE EVOLUTION OF APPLE VARIETIES.

Mr. J. H. Lang, Harcourt, Vic., points out the evolution of Apple varieties in Australia. At first English varieties were grown, later American varieties were dominant, now Australian-raised varieties are commencing to hold the field.

SOUTH AFRICAN CROPS.

The large increases in cotton, Peanuts, and tobacco crops in the Union of South Africa, is the feature of the estimates of the 1928 crops.

The following are some of the estimates compiled:—Maize: Transvaal, 7,823,000 bags; Orange Free State, 6,702,000 bags; Cape Colony, 2,418,000 bags; Natal, 2,287,000 bags. Total, 19,230,000 bags. Bags contain 200 lbs.

Tobacco:—The total European Tobacco crop is estimated at 23,500,000 pounds, an increase of 17½ per cent. on the previous season. Of this total, 1,000,000 pounds will be Turkish Tobacco. This is an increase of 25 per cent. on the previous crop of Turkish Tobacco.

Cotton:—The production of seed cotton is estimated at 11,233 bales (18,000,000 lbs.). Last year the production was 8,194 bales.

Groundnut Crop:—The total Groundnut crop is estimated at 317,000 bags of 70 lb. nett, i.e., an increase of 41 per cent. over the estimated production for last season. This will be a record crop for the Union; the next highest yield of 278,518 bags was harvested during the 1924/5 season.

Approximately 66 per cent. of the total crop, it is expected, will be produced in the districts of Waterberg, Potgietersrust and Pietersburg, in the Northern Transvaal.

PROTECTION WANTED FOR QUEENSLAND PEANUTS.

Owing to the difficulty of disposing of its home-grown Peanuts, in competition with imported Peanuts, the Queensland Peanut Board has asked the Council of Agriculture to bring under the notice of the Commonwealth Government the need for complete and absolute protection of the industry.

AUSTRALIAN PRODUCE IN U.K.

Activities of the Empire Marketing Board.

The Empire Marketing Board continues its good work in advertising Australian goods in the United Kingdom. They have recently issued two posters, which are being reproduced in the most important papers in the U.K. One is an advertisement for Australian Apples. "It's a far cry from April showers in England to glorious autumn in Australia. It's not so far to the fruiterers, where the pick of the Australian Apple harvest is gathered for you. The ripe fruits of nine months' Southern sunshine are here to carry you through a treacherous Northern spring. Ask for Australian Apples." The other praises our "plump, golden-brown, juicy and seedless Sultanas," and both bear the slogan, "The Sun Never Sets on the Orchards of Empire."

BANDING TREES FOR CODLIN MOTH CONTROL.

A new method of dealing with the codlin moth has been expounded by Mr. L. Haseman, of the Missouri College of Agriculture. Bands of cheese cloth are wrapped round the trunks of Apple trees in the spring. The worms gather in these bands, and when a mixture of beta naphthol and engine oil is applied, the result is directly fatal to the worms .

NEW ZEALAND'S GROWING TRADE.

Each year sees an increase in the fruit export trade of New Zealand. More than a million cases of Apples and Pears will have been sent overseas when the last fruit cargo leaves the Dominion this season.

SOUTH AFRICAN PAPAWS.

An experimental consignment of Papaws sent from South Africa to the London market recently, arrived in good condition, and the fruit sold at 3/- each.

FERGUSON'S FRUIT BOOK.

Ferguson's Fruit Book for 1928-9 is to hand. This bright catalogue should interest fruitgrowers. F. Ferguson & Sons, whose nurseries are at Hurstville and Camden, N.S.W., specialise in pedigreed fruit trees, "bud selection" being their slogan; they claim to have the largest nursery fumigator in Australia, at Hurstville, where stock is treated under supervision of the N.S.W. Department of Agriculture.

There is an interesting diagram in the catalogue dealing with square and septuple system of planting, and a fund of information is given that should be of interest to fruitgrowers.

There is a big list of fruit trees, berry bushes, and flowers, accompanied by price lists.

A NEW CROP.

Visitor: "Why are you running the roller over that paddock."

Farmer: "Well, Miss! I'm going to grow a crop of mashed potatoes this year."

Queensland

Current Topics Discussed—Banana "Bunchy Top" and Inspection—Bowen Tomato Growers Reject Compulsory Co-operation.

(By Our Correspondent.)

SO FAR this year has been characterised by excessive rainfall in the southern districts, where the fall has, during the first five months, exceeded the annual average. Small crops have suffered in consequence, and the presence of

"blight" amongst Tomatoes

is a very common occurrence. Though the spraying of this crop is compulsory, there is no one to see that the compulsion is applied, a feature to which we are quite accustomed under Departmental regulations.

Though the compulsion is desirable, the wide extent of country, with its sparse population, renders general applications practically impossible.

The incidence of

Banana "bunchy top,"

which is still with us in the south-east part of the State, may well be quoted in this connection, and that its eradication has not been accomplished is in a great measure due to the growers themselves—failing in appreciation of their plain duty in the matter. Exceptions exist in some districts, but they are very few.

The position has now reached that stage when drastic and immediate action is imperative if the southern areas are not to be sacrificed to the invader.

One of the principal districts—Cooran—has taken the matter seriously and

appointed its own inspector

to go through the plantations and advise growers in respect of the disease, should it make its appearance, but in other districts, where the disease is established, principal energy appears to be devoted to belabouring the Government for failing to provide inspectors for every small area, and then to endeavour to evade compliance with the orders issued by inspectors.

That practically the whole of the town gardens (and there are many) which contain Bananas also harbour the disease is well known; the extent to which trifling with the matter may safely be allowed has long since passed, still there is no indication whatever of Departmental action.

Probably, like our other serious pests, the town gardens will provide a sanctuary whereby the remainder of the State may be liberally supplied with the necessary material as required for re-infestation—should the country areas become reasonably denuded.

Press reports mention the Cooroy district as being selected to include the site of the

Southern Experimental Station,

and the selection is credited with giving satisfaction, but a fly has drifted into the ointment in the shape of disinclination of the southern growers contributing toward the northern station—which they would certainly be obliged to do, as the northern production is light, but when the position is reversed, as it undoubtedly will be, their status as contributors on these lines may be rather awkward. The position admits of ample friction, and indications suggest its demonstration.

The remarks re compulsory co-operation in your last issue are rather appropriate to the circumstances, but a feature which has escaped previous mention is the matter of representation of the different factions or councils forming part of the show.

The citrus season

now being in effect, this section may be taken, and the question asked—Do the various members composing it represent equal values—equal output or equal areas in the respective districts—or just how is the allocation derived?

Mr. Pfrunder complains of a correspondent imputing that Stanthorpe will not grow Apples. He is referred to notes in last issue to the general quality of temperate fruits. Parts of the Southern Tableland produced fruit equal to anything seen in the Commonwealth, whilst isolated orchards produce nothing worth consideration, and are adapted to do so indefinitely, which is to some slight extent responsible for the return per acre being by far the lowest in Australia.

40-year-old Lord Nelson Apple tree on Mr. W. J. Long's orchard at Glen Niven, near Stanthorpe. Queensland. This is on seedling stock; yielded 25 bushels this season, and an average of 15 bushels per annum for five years.

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.

New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

That most inferior trees were imported cannot be denied. The senior official of the fruit branch of the Agricultural Department, questioning a statement until corroborrated that such inferior stock could be supplied by any southern nursery.

The outcry for some years has been for Apple trees on seedling stocks,

BRISBANE

F. B. BOLTON & Co.
ALBERT HOUSE,
BRISBANE.

Brokers and Selling Agents for
FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

We sell to wholesale Distributors only, and do not handle growers' consignments.
We act as Railway Freight Agents for growers' joint truck loadings, and secure lowest freight rates.
On Forward Sales of fresh fruit we act for sellers and collect cash in exchange for delivery order.

COVENT GARDEN,
LONDON
Ridley, Houlding
& CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.,
Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

and no stress is needed in mentioning the lack of initiative that such stocks have not been raised in profusion in the district. Most suitable material is at hand, but it is so much easier to blame nurserymen (and rightly so) than attempt anything ourselves, so we continue to blame them.

Compulsory Co-operation Rejected

Growers at Bowen (Q'land) prefer their own Co-operative Association to C.O.D.

Following on the subject of "compulsory co-operation" in the last issue of the "Fruit World," and the methods of the Queensland Committee of Direction of Fruit Marketing (usually referred to as the C.O.D.), a letter is to hand from Mr. D. G. Wills, of Sydney, who is the inter-state representative of several powerful fruitgrowers' organisations.

Mr. Wills states that 80 per cent. of the Tomato growers at Bowen, Queensland, are strong supporters of their Association, and do not desire interference or control by the C.O.D.; he gives the following details in a circular recently issued by him:—

A certain amount of publicity having been given to the struggle for supremacy in Bowen, between the Bowen Farmers' Association and the C.O.D., it is to the interests of Queensland growers generally that they should know the true position of affairs in Bowen and the events that lead up to the present intolerable position, brought about by the high-handed action of the C.O.D.

After having some twelve months' experience of the inefficiency of the C.O.D. methods, the Bowen farmers took advantage of the High Court decision in respect to the powers of the C.O.D. and regained their previous right to manage their own affairs. Since that time they have carried on with increasing success, until practically all the Bowen farmers were either shareholders or were satisfied with the services rendered by the Bowen Association.

About the beginning of April the manager of the C.O.D. visited Bowen and had a consultation with the directors of the Association, and placed certain proposals before them. It was agreed by the directors that the proposals mentioned be submitted to the farmers at the annual general meeting. At the same time the manager of the C.O.D. made it clear that whether the meeting decided to agree to the C.O.D. proposals or not, it was his intention to establish a branch in Bowen.

Before the general meeting was held, a long circular, setting out the proposals of the C.O.D., was sent to every Bowen farmer, so that every one concerned was fully acquainted with what the C.O.D. had to offer.

The general meeting was held on April 30, and 114 farmers attended (this being a record meeting).

The C.O.D. proposals were discussed, and also the counter proposals by the directors of the Bowen Farmers' Association, and it was unanimously resolved that the farmers present continue to support their own Association. Considering that the growers present at this meeting are responsible for the production of at least 80 per cent. of all Bowen consignments to southern markets, the reasonably minded would naturally conclude that the question of control was settled.

Subsequent events have proved, however, that the C.O.D. overtures to the Bowen Association were only made as a matter of form.

Fruit Shipments
United Kingdom
and the Continent
W. D. PEACOCK
& CO.
24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

TASMANIA
Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.
Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.
Correspondence Invited.
H. JONES & CO. LTD.,
HOBART

The C.O.D. proposals involve the extinction of the B.F. Co-op. Association.

For the past seven years, in my position of Sydney manager for the Bowen Farmers' Co-op. Association, I have been responsible for the collection of the proceeds from agents of the whole of the consignments forwarded through the Association. In this way hundreds of thousands of pounds of Bowen farmers' money have passed through my hands, and

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

during the whole of the time I have acted for the Association, **not one penny has been lost to Bowen farmers through agents; defalcations** and all claims for railway shortages have been paid.

No other fruitgrowers' organisation in Australia working under similar conditions can show this result, nor can the C.O.D. rival the B.F. Association in this, or in any other respect where service to growers is concerned.

In addition, Bowen farmers are the only ones in Queensland who have received the benefit (through their Association) of free bank exchange on agent's cheques. This consideration to Bowen farmers was so valued by them that the C.O.D. have been impelled to offer a similar concession as one of the many special inducements to entice Bowen farmers from their avowed intention of supporting the B.F.A. Why is Bowen selected for this **preferential treatment?** The Southern Queensland growers do not receive this valuable concession.
Other concessions offered are:—

(1) A cut flat rate of freight **without regard to cost.**

(2) A special rebate of ½d. per case on all full cases forwarded through them, provided the empty cases are purchased through the recently established local branch of the C.O.D.

(3) A promise to obtain 1 per cent. rebate from agents to be allowed direct to the growers by agents.

Referring to the freight concession, are the C.O.D. justified in charging a proportionately lower freight to Bowen growers than is charged to other sections of Queensland growers? and is it with the knowledge and consent of those other sections that their funds held by the C.O.D. are being used for this extraordinary attempt to gain control of the Bowen farmers' industry?

In respect to the C.O.D. **case concession** of one half-penny. This is most irregular procedure, and is an evident blow at the trading operations of the Bowen Association. It is well known to Bowen farmers that the establishment of their own trading Association has been the means of bringing down the price of quarter cases by nearly 25 per cent., yet the C.O.D. say they must be suppressed.

The 1 per cent. rebate was arranged by the B.F.A. as a concession from twenty-four authorised agents. As it is the policy of the C.O.D. in Bowen to receive consignments to any agent in Sydney, this would result (in the event of a C.O.D. success), in breaking down the B.F.A. arrangements, and eventually neither the B.F.A. nor the C.O.D. **would be able to obtain this concession.** The saving last year to Bowen farmers in this respect was £720. It is therefore obvious that the C.O.D. **are not concerned about the ultimate fate** of this rebate, so long as the promise of it can be used in the meantime to strengthen their position in Bowen. I can authoritatively state that most of the agents and merchants have declined to allow the rebate direct to growers as required by the C.O.D., **but have undertaken to pay the B.F.A.** on all consignments forwarded through them.

The C.O.D.'s proposal to the Apple and Pear Growers' Association of Victoria to supplant me in carrying out the work of transportation and market supervision of Victorian fruit forwarded to Brisbane market and the disparaging and damaging statements made therein regarding my work as Victorian fruitgrowers' representative

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

"YARRA"
BRAND
SPRAYS
PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street / 155 Yarra Street } Abbotsford, Vic.
Tasmanian Agents—
H. L. HOPKINS, HOBART

in Brisbane, can only lead to the conclusion that the blow aimed at the Bowen Association is also intended as a direct attack on my Queensland and **Victorian business.** The fact that the C.O.D. should offer to conduct Victorian growers' affairs in Queensland, while the present state of Queensland fruitgrowing industry requires so much attention is quite surprising.

Queensland Notes.

Mr. Wills then gives details of the loading system and freight concessions for bulk consignment, and then continues:—

"The C.O.D. is not entitled to retain the 20 per cent. reduction of N.S.W. freight, brought about without the slightest effort on their part, and **without the consent of the growers concerned.**

"I have rebated the full 20 per cent. reduction, thus saving £15,000 to Victorian fruitgrowers. The withholding of the freight reduction explains how the C.O.D. has built up a large fighting fund, and also financed an expensive organisation."

Queensland, June 9th, 1928.

The Editor, "Fruit World."

Sir,—As an instance of the failure of the Queensland Fruit Marketing Act, which gave birth to the C.O.D., I submit a resolution carried by the Cooran Banana Growers' Association relative to the deadly menace of the "bunchy top" disease.

After reading an official statement to the effect that this disease had appeared considerably further north than the then known limit, the Cooran growers (who market from 2,000 to 3,000 cases per week right through the year), approached the C.O.D. for provision for close inspection of their areas.

Manager Ranger advised them that all the inspectors were stationed at Eudlo (about 25 miles away).

As their presence in Eudlo has little bearing on the matter of close watch at Cooran, these "resolved" to levy themselves to the tune of an inspector of their own, and they have secured the best man for the purpose in the State—i.e., a one-time big grower, who was cleaned right out by "bunchy" on the N.S.W. border. Considering that about 40 per cent. of the huge freight bill paid by Cooran goes to the C.O.D., this being forced back to individual action, speaks badly for compulsory co-operation!

Yours,

CUDGEREE.

P.S.—This "freight" over charge amounts to little short of £20 per week.

THEIR POOR CHOICE.

Little Susie: "Mother, if I get married, will I have a husband like papa?"

Mother: "Yes, dear."

Susie: "An' if I don't marry, must I be an old maid like Aunt Jane?"

Mother: "Yes, dear."

Susie: "Mamma, we women don't get many chances in this world, do we?"

APPLE EXPORT COMPETITION.

Mr. H. G. Colombie's Enterprise.

Over 45 Apple growers and exporters attended a dinner given by Mr. H. G. Colombie at the Hotel Australia, Melbourne, on June 18th. Opportunity was taken to present prizes to the winners of the Colombie Apple Export Competition, and to celebrate the initiation of the "Opossum" and "Diamond" community fruit packs.

Mr. Colombie, who presided, stated that its object was to bring all sections of the fruit industry together.

Prize Cup in Apple Packing Competition. The smaller cup is retained by the winner annually.

He considered there should be more co-operation. The "Opossum" pack represented 69 growers in districts from Narre Warren to Bunyip, who packed their own fruit. The "Diamond" pack was taken by growers to packing sheds and packed by the I.F.M. Co. Each shed had a different colored label. He was very gratified with the first year's operations, but he considered that there was still much to be done before the Victorian pack attained the standard desired.

A number of toasts were honored, including "The King," "The Minister for Markets," "The Assistant Minister for Agriculture," and the "New Community Packs." The speech by the Minister for Markets in response to the toast, is reported elsewhere. The Assistant Minister for Agriculture, Mr. Cain, said the problem of export was one for Federal consideration. He advocated the calling of a conference of growers from all over Australia, which would decide what proportion of the fruit crop should be sent to each oversea market.

The prizes for the Apple export competition were presented by Mr. Cain, and a review of the competition was given by the Superintendent of Horticulture, Mr. J. M. Ward.

The following is a list of the points awarded (maximum 100):—

R. E. Fowler, Pomonal	84½
A. G. Robinson, Narre Warren	73
R. Webb, Narre Warren	71½
J. W. Bailey, Narre Warren	71½
Somerville Packing Shed	69½
Green Diamond, Hastings	68½
Blue Diamond, Hurstbridge	67½
Valley View, Pakenham	67½
W. Lipscombe, Croydon	65½

Those favorably commended included W. Grant & Sons, Beaconsfield, G. Grant, Beaconsfield; G. Priest, Pakenham; Tyabb Packing Shed; Fullard, Narre Warren; Heinz Bros., Toomuc Valley, Pakenham; Ford Bros., Harcourt.

VICTORIAN CITRUS CROP.

Will Be Normal.

Despite early promise of a record yield, the Victorian citrus crop is not expected to exceed last year's yield of 400,000 cases. The fruit this year is of good quality, but there is a preponderance of large navels, which do not find favour with retailers, owing to the slow sales. Shop customers prefer a medium-sized Orange, and the retailers, of course, must try to meet the demand.

It is estimated that there is a reduction of 40 per cent. of medium-sized Oranges this season. A big customer such as the Victorian Railways, prefers this class of Orange, but has promised to take over the large size in fair proportion. This will ease matters considerably.

Reports from Mildura (where large navels predominate), show that crop is lighter than expected, while the Swan Hill district will have heavy crops, and the fruit is not so large. Goulburn Valley crops will be normal.

The citrus groves planted five years ago on the shores of Kangaroo Lake, near Tresco (Vic.), by a number of well-known Melbourne business men, are now in full bearing, and a heavy yield of navels is expected from this new source of supply.

South Australian crops are lighter than last year, and 300,000 cases will probably be picked. This is 100,000 cases lighter than last year's crop.

New South Wales will have good crops from the Murrumbidgee irrigation settlements, and it is expected that anything between 300,000 and 400,000 cases will be marketed from this source.

Mr. B. S. B. Cook (V.C.C.A.), who has been touring the citrus groves of Victoria on an organisation campaign, says the industry is in a healthy condition at the present time, but there has been a great shortage of trees for planting owing to large shipments to Argentine, South America, where planting is being carried on extensively.

SULCAR
CARBONISED SULPHUR
Spraying Mixture.
THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED
DOES NOT BURN.
Manufactured by
SINCLARE & Co.
BOX 3, KING ST., P.O.-SYDNEY.
(Works,-Alexandria)

GENUINE
"Black Leaf 40"
IN
10lb. & 2lb. tins
DISTRIBUTORS
The PRODUCERS' DISTRIBUTING Society Limited.
SYDNEY and MELBOURNE

A SUGGESTION FOR AUSTRALIAN CITRUS GROWERS.

Advertising Campaign for Sunkist Grapefruit.

An intensive advertising campaign for Sunkist Grapefruit is running on the Pacific Coast, using newspapers, radio, store demonstrations and dealer service. Weekly insertions with illustrations by a popular artist are scheduled in newspapers for four months, telling of the superior quality and healthfulness of Sunkist Grapefruit. A dinner hour programme is being broadcast weekly over a network of stations; recipe books are being distributed, and dealer service men are helping retail dealers display Sunkist Grapefruit for sale.

WHEN MARKETING CITRUS FRUIT.

Production is only one half of the business of profitable orcharding—the preparation of the crop for disposal is a matter of no less importance. The following points, compiled by the N.S.W. Department of Agriculture, should be observed by the citrus grower in the marketing of his fruit:

1. Exercise extreme care in handling.
2. Place fruit carefully in picking bags.
3. Carefully transfer fruit from picking bag to box.
4. See that the box has no protruding nails or splinters.
5. Do not jolt the fruit over rough roads.
6. Grade carefully for size and quality.
7. See that the sizing machine is functioning properly.
8. Use a clean case.
9. Pack neatly and tightly, but do not squeeze or jamb fruit into boxes.
10. Stack cases on sides.

INCREASED DEMAND FOR LEMONS EXPECTED.

It is expected that the demand for Lemons this season will be brisk, owing to the development of pure fruit drinks, following the restrictions placed upon manufacturers of synthetic drinks.

Citrus growers in Victoria have already started planting more Lemons to meet the increased demands that are expected from this source in the future.

LEMON TREE ATTRACTS ATTENTION IN ARIZONA.

A Lemon tree that is anything but a "lemon" has appeared in the grove of a Salt River Valley, Arizona, citrus grower (states "Citrus Leaves," U.S.A.).

Six crops of fruit will be harvested from the tree within the current growing season, unless all present indications go astray.

Already the grower has harvested two crops; a third is ripening, the fourth is in sight with fruit the size of large walnuts, and the fifth one is forming, with fruit the size of grapes. The sixth crop now is in the blooming stage.

A branch from one of the trees has been displayed in Phoenix and is attested to by Mayor Frank A. Jefferson and civic leaders.

The tree is in a three-acre citrus grove owned by Duncan MacDonald and located nine miles north of Phoenix in what is known as the Arcadia tract.

ENGLAND LIKES GRAPE FRUIT.

Big Advance in Imports.

There has been a sensational advance in popularity of the Grape Fruit with the English people during the past few years.

In 1920 the imports of Grape Fruit from America and elsewhere into England were 10,000 cwt. Each year since has seen a big increase, and the figures for 1927 show that imports have risen to 379,000 cwt. U.S.A. was the largest exporter, but the West Indies, Cuba, Central America, and South Africa, shared in the profits.

It is interesting to note that South Africa is shipping Grape Fruit in larger quantities to Great Britain. Last year South Africa sent 18,000 cwt. to England, 5,000 cwt. increase on the previous year. The South African Grape Fruit is on the London market from June to September, and has the market practically to itself, for supplies from across the Atlantic are short at that period of the year. The supplies from British West Indies are heaviest from November to April.

The Imperial Economic Committee, in its Fruit Report, considers Empire producers (when production is developed on a sufficiently large scale), should be able to maintain Empire Grape Fruit on the English market all the year round.

"BRITISH" WINES FROM GREEK GRAPE JUICE.

The tactics of a group of English merchants in making "British wines" from Grape juice imported from Greece, for which an excise duty of 1/- per gallon is paid, has brought a protest from the High Commissioner for Australia (Sir Granville Ryrie), the Agent-General for South Australit (Sir Henry Barwell), and the Agent-General for N.S.W. (Sir George Fuller).

In an interview with Mr. Amery, Secretary of State for the Dominions, the Australian representatives pointed out the fact that Australian wine was dutiable at 4/- per gallon, and could not compete with the Greek product, which was becoming increasingly popular at workingmen's clubs in the North of England. They asked that the duty on foreign wines should be 8/- per gallon, regardless of strength, and 4/- per gallon on Empire wines of 27 per cent. strength, and 2/- for lower strengths.

Mr. Amery promised to put the matter before the Cabinet.

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England, the Continent and New Zealand.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

MANCHESTER

(40 Miles Inland)

Is the Nearest Deep-water Port to BIRMINGHAM, BRADFORD, COVENTRY, HALIFAX, HUDDERSFIELD, LEEDS, LEICESTER, NOTTINGHAM, SHEFFIELD, STOKE, and over 200 cities and towns in England's greatest industrial area.

The Bulk of Australian Fruit Is Landed in London

yet the population of the North and Midlands is greater by some millions than that of the South of England.

GROWERS AND EXPORTERS PAY THE BILL!

For Handling and Transport Charges and Deterioration of fruit despatched from London to the North for re-sale.

Official records of prices prove

There is no Better Market than MANCHESTER

and the Port, Dock, Sale Room and Forwarding facilities are

SECOND TO NONE.

Ensure Minimum Charges and Maximum Results

By Direct Shipment to Manchester Docks.

Address enquiries as to opportunities for direct trade to:—

W. J. WADE, Representative of the Manchester Ship Canal Company

8 BRIDGE STREET, SYDNEY, N.S.W.

Cables and Telegrams:— **"Portoman," Sydney.**

CARE OF MOTORS.

CORRECT LUBRICATION is the most important of all factors in the maintenance of the motor engine, and to obtain the best possible results the following points must be observed:—Use oil of the highest quality, and also see that the oil is of the correct body and character to meet the design, construction, and operating conditions of the engine. The oil must also be kept in good condition. Prior to starting for a trip, the indicator should be examined to see how much oil is in the crankcase. Do not over-fill. An excess of oil does not assure better lubrication, but increases consumption, causes smoking, fouled plugs and excessive carbon deposits. Periodic draining of the oil reservoir is one of the most important details in the efficient operation of the motor. If the motor is new, drain the crankcase after the first 500 miles. Thereafter, drain every 1,000 miles during summer and every 500 miles in winter. Drain just after a run, whilst the engine is hot and the oil thin and thoroughly agitated.

Hidden by the body of the car, the transmission and differential seldom receive the same care that is given the engine, yet they are equally important in the operation of a motor vehicle. As in the engine, each working part must be protected by a film of lubricant adequate to withstand the severe pressure developed, otherwise rapid wear will result. The supply of lubricant must be continuous and free from foreign matter

All parts on the chassis should be greased. This is easily applied by using the hub cap as a grease cup. The so-called "tuning" of a carburettor consists of adjusting it to give the correct explosive mixture at all speeds, and with present-day fittings this is not a very difficult undertaking. A high-grade motor fuel is necessary to obtain satisfactory carburetion.

The care of the tyres and tubes is one of the most important items in the running expenses of a motor. The tyres should be inspected frequently, and all small cuts or holes properly sealed or repaired, this preventing dirt and water working in between the rubber tread and the fabric, causing blisters or sand boils. Tyres should never be run partially deflated because the side walls are unduly bent and the fabric is subject to undue stress. The tyres should be taken off every month, and the rims cleaned and painted in the winter. When putting on the tyres, place a good coating of French chalk on the inner side to preserve the tubes.

CANNED FRUITS.

AUSTRALIAN CANNED FRUIT.

Scottish Complaints.

Mr. Paterson's Reply.

According to the Minister for Markets (Mr. Paterson), the Australian products exhibited to members of the Australian-Scottish delegation now in Scotland, about which complaint was voiced in cable messages, must have been at least from three to four years old. Complaints were said to have been made to the delegation by Scottish merchants that "Australian canned fruit was badly packed, uneatable, and half green, and that it had been necessary to obtain supplies from foreign firms."

Mr. Paterson said that none of the fruit in question had been packed under Commonwealth supervision, and that it had been shipped long before the present system of inspection before export was instituted. Since that time all canned fruit destined for export had been processed and packed under such strict supervision that it was impossible for products to be shipped which did not reach a high standard. Australian canned fruit had realised up to one shilling a dozen tins more than Californian fruit, and that was sufficient indication of the excellence of the product now leaving Australia. For several years no Australian fruit so far as was known had been sold through foreign firms. Australia House or the London representative of the Canned Fruit Control Board could place any retailer in touch with British suppliers of Australian produce. It was a matter for great regret that these old stocks were still damaging the reputation of Australian fruit in the United Kingdom.

HAMBURG
(GERMANY).
Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

F. W. Vear
Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
MELBOURNE, VIC.
Highest Market Rates Assured
Prompt Settlements

SEASON 1928.

Export of Canned Fruits.

The exports of canned fruits to various destinations from the commencement of the season to the end of May, 1928, were as follows:—

Destination.	Apricots. Doz. 30 oz.	Peaches. Doz. 30 oz.	Pears. Doz. 30 oz.	Total. Doz. 30 oz.
United Kingdom	59,903	284,859	106,835	451,597
New Zealand	7,721	13,905	4,234	25,860
Canada	1,050	3,600	700	5,350
The East	1,064	1,343	1,481	3,888
Miscellaneous	821	1,696	1,313	3,830
Total	70,559	305,403	114,563	490,525

MARGETSON
& CO. LTD.
Fruit Importers & Salesmen
30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool
Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL
Head Office—Covent Garden Market, London, W.C.
Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.
Shipping Nos.
431 and 432

BIG CANNING MERGER IN CANADA.

An important merger of Canadian canning concerns has just been completed, says "The Canner," Chicago. Headquarters will be at Windsor, Ontario. It is a 3,000,000-dollar merger, to be called the Associated Quality Canners Ltd.

NEW LABELLING PASTE FOR CANNERS.

A new labelling paste, which, it is claimed, will hold a label to any polished surface, hot, cold, dry, or wet, has been developed by the Dewey & Almy Chemical Co., Cambridge, Mass., U.S.A. In offering their "Gold Seal" tin paste to the trade, this company asserts that the problem of making labels adhere to plain or lacquered surfaces has been completely solved without the necessity for resorting to mechanical roughening of the surface or of treating them chemically before the label is pasted on.

The importance of making labels stick permanently is so well known to the trade as to require no comment. Those canners who have experienced trouble from labels loosening or dropping off will no doubt be glad to get the sample of this new "Gold Seal" tin paste, which is being offered by the Dewey & Almy Chemical Co.

WESTERN AUSTRALIA.

Horticultural and Viticultural Notes.

Seasonal Work for July.

(Geo. W. Wickens, Superintendent of Horticulture.)

GROWERS of Apples, Pears and stone fruits will find most of their time occupied this month in **pruning.** There are nearly as many styles of pruning as there are operators, each exponent claiming some special benefit accruing from the procedure he follows. It is certainly a fact that, provided soil and climatic conditions are suitable, fruit trees will produce crops of fruit under the most varied methods of training, and with little or no training at all, but there are certain fundamental principles underlying pruning which should be mastered by the beginner, and, having grasped these and acquired the habit of closely observing results from year to year, he will find he is able to train his trees satisfactorily and obtain good crops even though his style differs somewhat from orthodox methods.

To obtain success, every grower should have a definite system in view and follow it. This does not, of course, mean that he should perform all the work himself; that would be impossible in some of the large orchards, but he should be able to tell his employees how he wishes the trees to be pruned, and see they are done in that way, for, although there are many styles giving good results, sudden variations from year to year, when different pruners with divergent views carry on the work, are decidedly bad for the trees and costly to the owner.

To prune for profit

is the object to keep in view, and to achieve this, each tree must be treated in such a way that it will produce a maximum quantity of fruit of good quality and marketable size. Leaders must be spaced so as to allow light and air to penetrate freely to every part of the plant, while guarding against over-exposure, which results in sun-burned bark and fruit. In the tree's earlier years care must be taken by moderately hard pruning to force growths from buds all along each leader's length, and avoid bare spaces so often noticeable, but so unsightly and unprofitable; while in later years, equal care must be taken in guarding against over-crowding of bearing buds and shoots which may produce many fruits, few of which are of good quality or marketable size.

There are many who have embarked in the industry with little or no knowledge of the habits of the trees from which they hope to derive a livelihood, and these are strongly advised to get in touch with the Orchard Inspector, who supervises their particular district and request him to give a practical demonstration on their own trees, illustrating the best way to prune them. The inspectors have had long experience in this work, and know the habits of the trees under the conditions obtaining in the various fruit-growing portions of the State, and a beginner will learn more in a couple of hours than he will from a week's study of a text-book. As he gains in experience, he will find that a good text-book is a very valuable aid, but a complete novice finds it hard to recognise from the description given on the printed page the various buds and growths on the actual trees.

Planting deciduous trees

should be pushed on with during this month. If the land is too wet for planting operations when the trees arrive from the nursery, every care must be taken to heel them in in moist (not wet) soil to prevent the roots drying out.

Trapping should be continued in all Orange groves where fruit flies were known to have been present during the past summer.

Oranges and Mandarins should be watched carefully for signs of the pest, and all fruit found to be infested should be boiled.—W.A. "Jour. Agric."

Lower Chittering Notes.

Fair Citrus Crop: Fumigation in Daytime Harmful.

RAIN has at last made an appearance. This summer has been one of, if not the driest on record, and this district was within a few days of being seven months without a really useful rainstorm. Easterly winds were prevalent during the whole of the dry spell, which had a devitalising effect on all Citrus trees.

As a result, the fruit on the older trees is on the small side, the rains being too late to be of any benefit to those of the Navel variety.

It is yet too early to state definitely whether the Valencias will make further growth. While the younger trees have not suffered to any extent, the fruit is not so big as one usually expects to find, which is perhaps something to be thankful for.

Most growers have started marketing their fruits and prices are firm for good quality stuff. Export trade is brisk, and some brokers, looking for big fruit, are departing somewhat from the old order of things.

Generally speaking, growers are looking forward to a good season and firm prices despite the setback caused by the dry summer.

Daytime Fumigation Harmful.

Two growers carried out their fumigation during the daytime this year, for the first time, with very indifferent results. Scorched trees, and a poor kill being the result (despite the fact that conditions were ideal) will, I think, bring back the old, but much safer night work. Our opinion is that while the dosage recommended is about all the tree can stand in the day time, it is not a big enough dose for a 100 per cent. kill.—"Surtic."

FRANK WALKER

Can offer all leading Export varieties of Apples worked on Seedling stocks, clean vigorous yearlings.

Our New Apple **LALLA** is available for 1928 Season.

Growers of Apples who have not seen this fruit are invited to ask for a sample Fruit Post Free, it stands alone at the top for quality.

PARTICULARS ON APPLICATION

110 BRISBANE STREET, LAUNCESTON, Tasmania.

TREES

THAT BEAR TOP PRICE FRUIT

BUDS and GRAFTS used in propagating are specially selected from prolific bearing parent trees. Therefore you can depend always on finest market fruit with consequent highest prices when you plant

GOODMAN'S FRUIT TREES

All our stocks are hardy growers—the outcome of our valuable 39 years' experience in cultivating strong, healthy trees. Goodman varieties include all well-known and choicest fruits.

We Raise Leading Varieties of

APRICOT ALMOND
PEACH NECTARINE
PLUM PRUNE
CHERRY QUINCE
APPLE PEAR
JAPANESE PLUM
FIG MULBERRY
WALNUT GRAPE
FILBERT NUT
ENGLISH CHESTNUT
BLACK, WHITE, AND RED CURRANTS
GOOSEBERRY RASPBERRY
LOGANBERRY
STRAWBERRY Etc., Etc.

Send for Copy of

Free Illustrated Catalogue

It contains much valuable information for growers, and full details of all our trees.

C. J. GOODMAN
PICNIC POINT NURSERIES
BAIRNSDALE, Vic.
P. O. BOX 47

(W McF.)

MANUFACTURE OF VEGETABLE CONCENTRATES.

A company has been formed in Great Britain for the purpose of placing on the English market vegetable concentrates consisting of 2 oz., 4 oz., 8 oz., and 1 lb. pots of vegetable extracts for culinary and other uses, in the same way that various meat extracts are now presented.

Celery, Onions, Carrots, Carrot tops, Sugar Beet tops, Lettuce, Watercress, Potatoes, Spinach and Cabbages are all to be concentrated in such a way that the household or hotel cook may use them for soups, in flavouring, and in many other ways, it is claimed by those backing the proposed company.

"THE GARDEN LOVER."

Australia's Brightest Horticultural Monthly.

The June issue of "The Garden Lover" is one of the brightest productions that has been published. The "Princess Mary" Violet in natural colours makes an attractive cover for this up-to-date gardening journal, which is becoming increasingly popular with amateur and professional gardeners. Every range of subject relating to culture of flowers, fruit, vegetables and shrubs is dealt with, also bush-house and glasshouse notes. The methods expounded for dealing with insect pests should prove valuable and instructive. The articles on Rose Culture, by Mr. James Allan (past President of the National Rose Society of Victoria), and Mr. H. Hazlewood, of N.S.W., are particularly interesting contributions in an issue that is packed with good reading matter, and profusely illustrated.

EARLY TOMATOES.

Following the lead of Chinese and Spanish Tomato-growers, many Australians are now using the ridge system for growing early Tomatoes in the vicinity of the Murray River.

The system entails considerable work and long hours, for the plants have to be protected by wood and hessian coverings from frosts. Growers, however, consider that they are fully compensated for their labour, for early crops bring big prices, and yields of 600 cases per acre of early fruit are common.

The ridges are made about five feet apart, from crown to crown, and are 2 feet in height. The plants are set about half-way up the ridge, and when the boards and bagging is in position, they are only exposed on one side, usually the northern.

The boards used are ten inches wide and an inch thick, and are usually discards from sawmills. Planting out takes place in July and August. About a ton of fertiliser for old land, and half that amount for new land is used in preparing the ridges for Tomatoes.

Cutworms.

These caterpillars are still to be found in numbers in vegetable gardens. They are particularly destructive to Potato, Bean, Onion and other plants. Against these visitations the only practical means of defence is the use of baits. A formula which has given good results is the following:—Bran 10 lb., molasses 4 lb., Paris green 4 oz. The whole to be made into a paste or dough and placed, in small pieces, about the size of a nut, in close proximity to the vegetables. The baits should be put out just before dusk.

Carrot Aphids.

These insects have been exceedingly numerous this season. They swarm on the young leaf growths, suck out the sap, and the leaves become discoloured and shrivel up. Spray with nicotine sulphate or black-leaf 40. Force spray into centre of plants.

FIGHTING INSECT PESTS IN THE ORCHARD.

Peach Aphids.

Spray at once with lime sulphur or red oil to destroy the eggs of the Peach aphids.

Cherry Aphids.

Spraying should be carried out at once to destroy the eggs of Cherry aphids, which do much damage to the young growths. Use lime-sulphur or black leaf 40.

Codlin Moth.

See "The Fruit World," June 1, 1928, p.

Mussel, San Jose and Other Scale Insects.

It is advisable to spray in early winter with red oil: 1 gallon of oil in 20 gallons water. Remove all loose bark from trees before spraying, this bark should be burnt.

Vine Scale.

This is a large brown scale, one of the largest scale insects to be found in gardens and orchards. It is spreading to quite a number of different kinds of fruit trees. When vines or trees are pruned, spray with red oil or lime-sulphur. Burn all prunings.

Black Aphids on Citrus Trees.

These small black aphids are very destructive indeed, and if not destroyed, will often kill young Citrus trees. They usually cluster on the young growths, sucking out the sap and causing the growths to turn black.

Spray with nicotine sulphate or black-leaf 40.

Red Spider and Bryobia Mite.

When fruit trees are dormant, spray with red oil, 1 in 30.

Woolly Aphis.

See "The Fruit World," June 1, 1928, p. 237.

Painted Apple Moth.

See "The Fruit World," June 1, 1928, p. 237.

The £ s. d. of Fertilisation

The smaller the holding, the sooner will the farmer or orchardist learn the £ s. d. of fertilisation. Balanced rations for all crops, some regard for the different composition of plants and trees, and a recognition of the money value of Nitrogen, because Nitrogen means higher yields, better crops, and *more profit* per acre. . . . . .

SULPHATE OF AMMONIA is Nitrogen in its ideal form, soluble (quickly available), cheap (the cheapest nitrogenous fertiliser in Australia), and profitable on all forms of agriculture and horticulture.

Sulphate of Ammonia is now produced in a dry, free-running "neutral" condition.

Write for literature to

THE METROPOLITAN GAS COMPANY,
196 Flinders Street, Melbourne.
Telephone: Central 8162.

SA 2/28

NEW LIFT FOR TRACTORS.

One of the most useful appliances that has yet been put on the market for the use of the fruitgrower, is the Smithco Friction Lift. The lift can be attached to any make of tractor, and is so simple in arrangement that the driver of tractor need not take his hands off the steering wheel to put the lift in action. This is done with the foot, and the pressure applied lifts the implement being used, or lowers it, as the case may be.

With the aid of this lift, the grower ploughing among the fruit trees can get as close to the trees as required. No levers are used, and the lift can be adjusted to a tractor very quickly.

The device has proved a boon to the users of the two-way or Tandem cultivator. No other lift has yet been made that can handle this type of cultivator.

The depth of the implement used can be adjusted while the tractor is in motion, thus saving considerable time by not having to stop and adjust levers.

Although the contrivance has only recently been brought under the notice of fruitgrowers, a number of them have already adjusted the Smithco Friction Lift to their tractors, and orders have been placed at Croydon, Pakenham, Mornington, Healesville, Doncaster, Kyabram, Shepparton, Bamawm, and Mooroopna.

The Smithco Friction Lift is being manufactured at the engineering works of Messrs. Langwill Bros., and Davies, 110 Sturt-street, South Melbourne, by a company which also intend to manufacture implements for the man on the land, which can be produced cheaper, since no levers are used.

ONE FLEETING HOUR.

"You don't see much of your husband, do you, dear?"

"About an hour each day."

"Oh! What a shame."

"It's all right, my dear, an hour soon goes."

Northerner: "Pretty mild winter you have down here."

Southerner: "Mild? Do you call two feet of snow mild?"

Northerner: "Two feet! Say, man, the snow was so deep in our country last winter that the farmers had to jack up their cows to milk 'em."

STATE MINISTERS CONFER WITH HORTICULTURISTS.

At the conference held in Perth, W.A., on June 5th, which was attended by the various States' Ministers of Agriculture and senior horticulturists, many subjects of importance to fruitgrowers were discussed, and resolutions passed by the committee appointed under divisions—Horticulture and Viticulture.

Among the Horticultural officials present were:—Messrs. C. G. Savage, N.S.W.; J. M. Ward, Victoria; P. H. Thomas, Tasmania; G. W. Wickens, W.A.; and W. L. Summers, S.A.

Mr. G. W. Wickens was elected Chairman.

Among the subjects dealt with was the suggested adoption of the Canadian standard bushel case by Victoria and Tasmania. After discussion, the Committee decided that—

"Pending the receipt of further detailed information on this matter following on the experience gained by this year's export, this Committee recommends that this item be deferred till next Conference."

The suggestion of Victoria regarding fruit statistics, was referred to Committee with the following result:—"The Committee recommends that each State shall endeavour to prepare monthly reports detailing the quantity of fruit held in cold store, and in ordinary storage."

With regard to other suggestions from Victoria, it was decided that—

Pear Stocks.

"This Committee recommends that each State interested in the production of Pears conduct investigations in regard to Pear stocks, particularly in respect to resistancy to Pear root aphis."

Dried Fruits.

"In view of the fact that the recent Federal Conference of Public Health authorities recommended that the limit for sulphur dioxide allowable in dried tree fruits be reduced to 7 grains per lb., this Committee recommends that each State take action to urge that the limit be retained at 14 grains per lb."

Experiments have shown that in commercial drying it is almost impossible to reduce the sulphur dioxide content to 7 grains per lb. Further, the Ministry of Health of Great Britain approved of a limit of 14 grains per lb. in imported fruit as from 1st January, 1927.

Ohanez Grapes.

"After discussion and in view of experiments being conducted, this Committee is of opinion that the time has not arrived for the fixing of grade standards for export."

Frost Forecasts.

"In view of the report made by the Council for Scientific and Industrial Research, it appears that such protection is uneconomical and that no good purpose would be served by asking for the publication of frost forecasts: the Committee, therefore, recommends that the item be withdrawn."

Arsenate of Lead.

Suggested investigation of effect of arsenate of lead upon the soil, referred to Committee—

"In view of further information which has been obtained in this connection the Committee recommends that the item be withdrawn."

Grading of Apples and Pears.

The motion put forward by New South Wales was not seconded: other members of the Committee being of the opinion that, "as the Commonwealth standard grade has proved a good workable commercial standard pack, it is not considered desirable to make any alteration in the direction suggested."

Sizing of Fruit.

Tasmania asked for amendment of regulations governing sizing of fruit. It was decided to—

"Recommend that the Federal and State authorities be requested to amend the regulations governing the sizing of fruit, so as to make it optional for the size or number of fruits in a case to be marked on the container."

Fruit Sprays.

After hearing the explanation of the provisions of the Western Australian and Queensland "Plant Diseases Act" dealing with the registration and sale of insecticides and fungicides and the administration of same put forward, the Committee commends the Queensland and Western Australian provisions for consideration by the other States as a basis for uniform legislation."

Fruit Crop Reports.

"That in future fruit crop reports supplied by each State for the information of other States, the percentage over or under normal crops should be shown: the estimated normal crop to be shown in each instance."

BERRY DISEASES TO BE COMBATED.

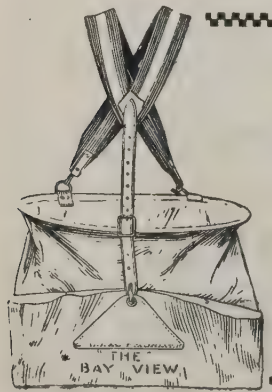
Action in Victoria.

Berry-growers will view with favour the establishment of a Berry Research Farm, where investigations into berry fruit diseases will be a feature. An officer of the Department of Agriculture will undertake the research work.

Probably no other section of the fruit industry has suffered so much from the ravages of pests as the growers of berry fruit. For several years, thrip and other insect pests have played havoc with the berry bushes, and "white root" among the Raspberry canes has been particularly bad in the Dandenong Ranges. Many growers of berries have given up this branch of the industry as a bad job during recent years, but now that the Department of Agriculture has come to the rescue, they may take it up again.

The establishment of a research farm is the most important step that has been taken to solve a serious problem, and the farm should provide some interesting work for the science branch of the department. Up to date, the pests that visit the berry-growing districts have had things all their own way.

The spot selected for the farm is Kalorama, where Mr. D. B. Adam, plant pathologist, is supervising the plotting out of the ground. In addition to planting out State-reared cane sets, other varieties will be introduced from abroad.



"BayView" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

Victoria

Metropolitan Fruitgrowers' Annual Conference, July 5th.

The annual conference of the Metropolitan Fruitgrowers' Association will be held at the Recreation Hall, Box Hill, on Thursday, July 5th, at 2 p.m.

The opening will be performed by Mr. Cain, M.L.A., Assistant Minister for Agriculture. The President is Mr. R. M. Finlay, and the Secretary, Mr. J. W. Aspinall.

Northern Victorian Fruitgrowers.

At the annual meeting of delegates to the Northern Victorian Fruitgrowers' Association, the following officers were elected:—President, Mr. W. Young; Vice-President, Mr. J. McDonald; Secretary and Treasurer, Mr. J. A. Rushton; Auditor, Mr. A. T. B. Goyen

CHECKING APRICOT SCAB.

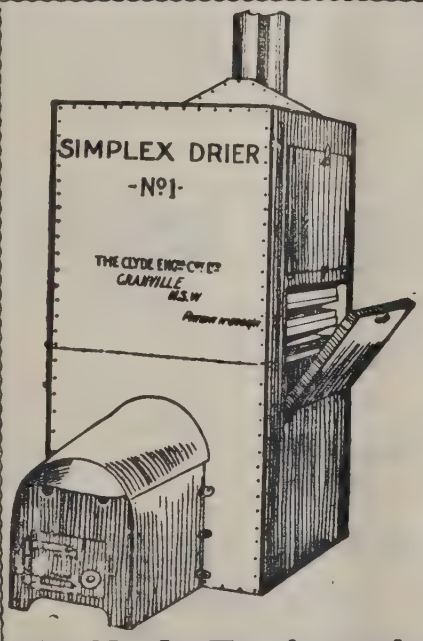
Goulburn Valley Tests.

The presence of scab in Apricots has caused growers in the Goulburn Valley some concern during recent years, and the Department of Agriculture has been carrying out a series of experiments to cope with the disease. The results achieved by Mr. S. Fysh, of the Science branch, are very encouraging. The most promising results obtained in 1926 were from Bordeaux mixture (6.4.40), applied at the dormant period and again at the pink bud stage.

The experiments of 1927 were designed to further test the efficiency of this spray. Lime casein was added as a spreader, the percentage being one pound to every 100 gallons of spray.

Moorpark trees, 14 years old, were selected for the tests. They were divided into 36 units, and each method of treatment was repeated at least four times at different places on the block. For the purpose of comparison, four units of trees unsprayed for one year and two units unsprayed for two years were included in the experiments. The weather conditions on each occasion of spraying were favourable, and the sprays had dried on the trees before any rain fell. Experiments were made (1) in the autumn before the leaves had fallen, (2) in the winter after the leaves had fallen, (3) at the pink bud stage, (4) in the autumn and again at the pink bud stage, (5) in the winter and again at the pink bud stage.

Summarising the results of these experiments, Mr. Fysh declared that the following method had reduced the percentage of scabby fruit 46 per cent. in a year that was very favourable for the development of the disease:—Two sprayings of Bordeaux mixture 6-4-40 (bluestone 6 lb., quicklime 4 lb., and 40 gallons of water, plus 1 lb. of lime casein spreader to 100 gallons of spray), one application either before the leaves had fallen in the autumn, or in the winter after the leaves had fallen, and the second application after the pink bud stage. The average percentage of scabby Apricots in the various sections were:—Trees unsprayed for two years, 62 per cent.; unsprayed for one year, 46 per cent.; autumn spray, 15 per cent.; pink bud spray, 10 per cent.; winter spray, 10 per cent.; winter and pink bud spray, 6 per cent.; autumn and pink bud spray, 6 per cent.

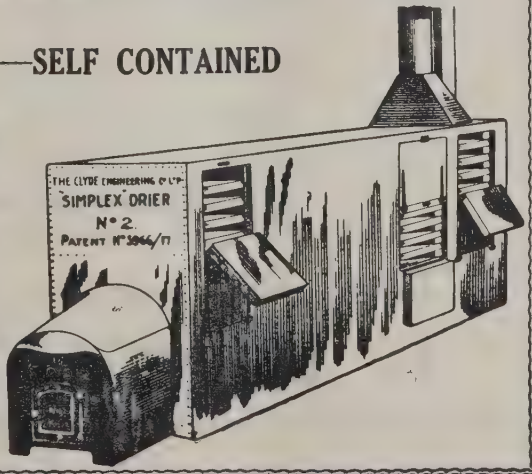


The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED



Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories

The Clyde Engineering Co. Ld.
GRANVILLE, N.S.W.

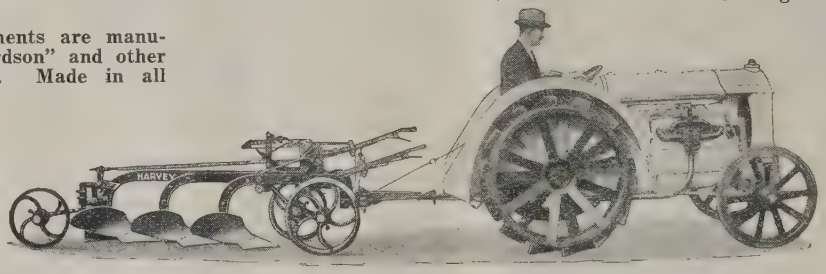
CULTIVATION is ESSENTIAL for GOOD CROPS

"HARVEY" IMPLEMENTS ENSURE SUCCESSFUL CULTIVATION

MADE SPECIALLY TO SUIT AUSTRALIAN CONDITIONS.

Write for Tractor Catalogue.

"Harvey" Tractor Implements are manufactured to suit the "Fordson" and other higher powered Tractors. Made in all sizes.



"Harvey" 3-furrowed power-lift Tractor Mouldboard Plow, Model Y.8.
Suitable for Orchard and field work. Any depth can be obtained while plowing.
Plenty of clearance under beams and between Mouldboards.

"Harvey" Subsoil Plow.

SUBSOIL PLOUGH

Every Grower knows the value of subsoiling. By its use the production of Arid Lands and worn-out Plantations is increased.

Perfect Regulation of Depth Obtained.

Fitted with steel beam, strong and high, with adjustable handles. The heel is adjustable to give the desired suction. An excellent medium for loosening the subsoil. It can be used with three or four horses, and a gauge shoe controls the depth.

"SIZE" YOUR FRUIT with the BETTER GRADER

APPLES, ORANGES, POTATOES, ONIONS
and other Classes of Fruit
PERFECT GRADING NO BRUISING

It is the cheapest-priced Sizer offered, and is so simple that even a boy can work it. Can be removed from place to place in your orchard wherever you desire to grade.

The Grader with only ONE moving element

One simple adjustment will give this variation in size:—4-5 grades, 7-8 grades.

Write for particulars.

PRICE: Grader only £16. with Table & Hopper £21/10/-

D. HARVEY, ORCHARD IMPLEMENT MAKER
BOX HILL, MELBOURNE, AUST.

SHOW ROOMS, 440 ELIZABETH STREET, MELBOURNE. AGENTS ALL STATES.

Nobelius' Fruit Trees

Known All Over Australia

for their

Strong, Healthy Growth

We have a particularly fine stock

of

Apple Trees

including the following:—

DELICIOUS	ROME BEAUTY
JONATHAN	DEMOCRAT
KING DAVID	DUNN'S
STAYMAN	GRANNY SMITH
WINESAP	CLEOPATRA
GRAVENSTEIN	ROKEWOOD
YATES	FIVE CROWN

GLENGYLE, Etc.

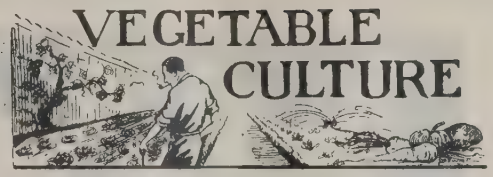
Write for 1928 Catalogue of Fruit Trees, Ornamental, and other trees.

C. A. Nobelius & Sons Pty. Ltd.

Gembrook Nurseries,

Emerald, Victoria.

Telephone: Box Hill 154.



(By "Syringa.")

Sowings for This Month.

As early in the month as the weather will permit, sow a full crop of the **Prickly Spinach** for spring use; and for a successional crop sow again towards the end of the month. If the ground be clear of weeds, this crop can be sown broadcast, otherwise it will be better to sow in drills, fifteen inches apart, as it then can be more readily kept clear of weeds.

A crop of the **Crimson Giant Forcing** variety of **Radish** can be sown now, being extremely hardy, and one of the quickest in arriving at maturity. The ground should be well manured, and, if possible, in a sheltered situation.

For spring use, another sowing of the **Early Horn** variety of **Carrot** can be made early in the month, choosing a dry soil that is rich and deep. Towards the end of the month, make a sowing of the **Scarlet Intermediate** variety, and also one of **Parsnip** and **Red Beet.**

For any of these crops, the land should be worked deeply, keeping the manure well below the surface, to cause the roots to descend straight and prevent forkiness.

A small sowing of **Turnips** may be made this month, and for early summer use a crop of **St. John's Day Cabbage** should be sown. A small sowing of **Veitchs Autumn Giant Cauliflower** can also be made.

Peas should now be largely sown at regular intervals, it being a safe rule that as soon as one crop is above ground another ought to be got in.

Make further sowings of **Onions,** and early crops should be thinned and transplanted as soon as the plants are fit to handle.

A crop of early **Potatoes,** such as **Early Rose, Early Vermont,** or the **Kidney** types, may be planted now on a piece of well-worked dry-lying ground.

Prepare for Early Cucumbers, Marrows and Melons.

Where early crops are desired of these vegetables, preparation should now be made for them.

In order to get the material for a hot bed, fresh stable manure should be prepared by turning it over several times, well mixing it, and watering it when dry. When ready for use, make the bed and put the frame on, leaving it uncovered for about a week to allow the rank vapours to escape, and then spread five or six inches of rich soil over the manure. In the centre where the plants are to grow, raise a mound of soil eight or nine inches above the surface, and sow from six to eight seeds in each. When the rough leaves make their appearance, let the plants be thinned out to the three strongest.

General Work.

During favourable weather, no time should be lost in preparing ground by digging it well over for future cropping in early spring. Whenever the land, however, happens to be wet and cloggy, it will be advisable not to touch it until it can be worked freely.

New Asparagus beds should be made, and old ones should be forked lightly over, and put in order for the growing season.

This is a good month to apply lime on ground that has become sour, and thus rendering it sweet and fertile again.

Herbs can now be lifted, subdivided and replanted.

A ragged lot of old hens converted into regular layers

HERE is an experience which will be of interest to all poultry owners, and which must surely convince those who have not given Karswood Poultry Spice a trial, of the sheer wisdom of doing so without any delay. Wonderful as this experience is (a better term would be "record"), it is but one of many, equally enthusiastic, that we are continually receiving. On the strength of this one, however, we ask all "back-yarders" whose fowls are not laying to give Karswood a trial. If you do you will soon have your fowls in fine fettle, eager to lay and to keep on laying right through the winter. Read how these fowls, referred to as a "ragged lot," were converted from a pack of non-layers to a flock of spirited, regular layers.

Every confidence in Recommending Karswood

Dear Sir,

Last March I came here to garden, and was asked to look after the poultry. I found about fifty hens, 2, 3 and 4 years old, running free and roosting anywhere, fed twice a day on wheat, and a few house scraps. Breed: White Leghorns, White Wyandottes, and crosses of same. Of course, it was moulting time, and they looked a ragged lot. I got them penned up by June, and gave them warm bran and pollard morning mash, with about half the quantity of Karswood specified for 40 hens. In two weeks they commenced to lay. July, I got 22 dozen (eggs in July here was a novelty); August, 44 doz.; September, 72 doz.; October, 73 doz. I have hatched 50 chickens, all doing well. Allowing for hens with chicks, sitting and killed, at present I have 36 laying hens, from which I get an average of two dozen per day for November.

This is not so bad for a lot of old hens. Had I some pullets and fed Karswood more liberally, I should certainly have got much higher yields. I used for the four months quoted, six 1 lb. packets of Karswood only. You are welcome to make what use you like of this statement. I have every confidence in recommending Karswood to my friends.

(*Signed*) *C. READER.*

Ross, Tasmania.

Supplies

Karswood Poultry Spice is obtainable at all wholesalers and stores at the following standard retail prices:—½ lb. packet, Price 1/-; 1 lb. packet, Price 2/-; 7 lb. tin, Price 13/-; 14 lb. tin, Price 25/-; 28 lb. tin, Price 48/-.

7/FP/28

POULTRY.

Feeding.

THE GREAT AIM should be to maintain the birds in a healthy state, taking care that the birds do not get into an overfat condition.

Good eggs and strong chicks cannot be produced from an overfat breeder. There is little danger of overfeeding the good layer with the right class of food when she is in laying condition, but this does not hold when she commences to moult and ceases to lay.

Obviously, if she is provided with an abundance of rich, stimulating food when not laying, and there is no tax on her system for the formation of eggs, the formation of surplus fat has every encouragement. As already indicated, this should be avoided at all costs.

The aim should be to maintain the breeders in what may be termed a lean condition. To achieve this, it is generally found a wise policy to at all times provide a ration of hard grains, such as wheat, oats, maize, etc. The greater variety of food provided, the better will be the fertility of the eggs, and the stronger the chicks. The grains should be fed in deep litter in order to give the birds exercise. Hens during the moulting period are disinclined to take exercise, and they will sit on the perch and grow fat if food is easily obtainable.

Sleeping in Nests.

It is a common practice for fowls, particularly when going through the moulting process, to acquire the habit of sleeping in the nests, and not on the perches. The reason for this is that the birds find the nest warmer. It is a habit, however, that should be stopped, for it encourages the presence of insect pests, particularly the red mite.

This pest is probably the worst enemy of domesticated fowls. It is a simple matter to deal with the pest when it makes its appearance on the perches, by having the latter arranged in such a way that they, or the feathers of the birds do not touch the walls of the house, or by giving the perches a frequent application of grease, to which has been added some disinfectant or kerosene.

Prevention Better Than Cure.

If red mite gets a foothold in the nests, it will be a very difficult matter to get rid of them. A board placed in front of the nests, or a piece of wire-netting arranged in such a way as to be easily put up or taken down, will serve the purpose.

The obstruction should be placed in position before roosting-time, and removed first thing in the morning. Obviously, some work is entailed in keeping the birds out of the nest at night, but it will prove a trifle compared with the labour of washing soiled eggs, and cleaning up vermin-infested quarters.

Is Early Hatching Profitable?

When dealing with the subject of early hatching, one is frequently confronted with the argument that early hatched pullets break into moult just when eggs are high in price. While this is to a large extent true, there are other factors to be considered, and these will be found to outweigh the loss sustained by the moult.

In the first place, early hatched chickens thrive better than those hatched late in the season, better prices are obtainable for the early cockerels when marketed, the pullets come on to lay some months before they break into a moult, and after the moult they mostly come on to lay again before the hens, and are all the better as breeders after having had a "spell."

On the other hand, chickens hatched in September and October meet with crowded conditions and variable weather; which necessitates more judgment in operating the brooders, especially at night, and when they are about half-grown they encounter the full heat of the summer. This causes a partial cessation of growth for a time, resulting in the pullets being later in coming on to lay, and they would not be suitable as breeders until late in the spring, if at all.

The first feed of chicks may be sprinkled on clean newspapers. The chicks in running around rattle the paper and call attention to the feed so that all start eating. After the first few days clean boxes or hoppers may be used and feed kept before the chicks.

Experiments prove quite conclusively that the addition of cod liver oil to the ration materially improves the hatchability as well as the general condition of the flock. A marked increase in the weight of the shell is also noted, which tends towards an improvement in hatchability.

For some time it has been supposed that it is a mistake to feed chicks too soon. This has resulted in a tendency to go to the other extreme and make the mistake of fasting the chicks too long before feeding them. If denied feed, chicks will fill their crops with extraneous material, such as sand, grit, straw, or almost anything that is available. This sometimes leads to serious consequences.

Feather-eating Habit.

The feather-eating habit is generally caused by a deficiency of salt in the ration. It may also be the result of over-stimulation by feeding condiments. Want of shell grit is also a cause, and the habit will spread among birds if the perches of the houses are placed too closely together. Feather-eating rarely occurs among poultry that have plenty of land to wander over. It is usually confined to birds who are cramped for room, and have no scratching material.

The only way to break the habit is to find out what is lacking, and remedy it. Birds will usually continue the habit until they have moulted. Dipping in a weak solution of bitter aloes will sometimes help matters.

BEEKEEPING.

Building Up Hives.

BEEKEEPERS SHOULD SEE that bees have ample stores of honey for winter and early spring. Satisfactory building up of the colonies in the spring depends upon many conditions, which date back to the previous summer or autumn. If the colonies were not in good condition last summer or autumn, they may dwindle during the winter, and this makes it impossible to build up in time for an early honey flow.

In order to have the colonies in good condition for winter, many large honey producers re-queen the colonies annually. This is done in the summer, in order that the young queen shall be at her best in the autumn.

Awards in the——— Colombie Cup Packing Competition

This Cup has been presented with the object of encouraging orchardists to put up a better pack and prize winners have just been announced.

NOTE THE MODELS OF "LIGHTNING" GRADERS THEY USE.

THREE MODELS 10A, ONE MODEL 5,
ONE MODEL 14, TWO MODELS 4A,
ONE MODEL 7.

Eight "Lightning" Owners Out of Nine Prize Winners.

An eloquent testimony that the **"Lightning" Fruit Graders** are **RIGHT** when fruit requires most careful grading.

THE "LIGHTNING" FRUIT GRADER CO.

5 Hoddle Street, Collingwood, N.9, Melbourne

Cable, Telegraphic Address, "LIGHTNING," Melbourne VICTORIA

It cannot be too strongly stressed that the bees must have plenty of honey in the hives. Colonies that do not have a good supply of honey on hand should be fed lavishly during the two months preceding the main honey flow, unless, of course, the bees are in a position where there is an abundance to be gathered. Even in this instance, there should be a reserve of stores to tide over rainy days and cold weather.

More colonies fail to build up in spring because of insufficient stores than from any other cause.

Moving Bees.

There are several methods of moving bees. There are many things that may happen to cause loss or injury of one or more colonies en route, and it is difficult to guard against them all. Loss of bees in moving is usually due to suffocation. Angered and aroused by the jolting of the hive, the bees rush to any opening and try to push their way out. If the entrance is covered with screen, the front row of bees crowd up against it, and are squeezed by the frantic efforts of those behind to force a passage.

The excitement and agitation causes the hive temperature to rise rapidly, and with the ventilation shut off at the entrance, it is little wonder that the melting temperature of beeswax (145 deg. F.) is reached. When the wax softens, the motion of the vehicle carrying the hives soon loosens the combs from the top bars, and the liquid honey, running over the combs and bottom boards, finishes any bees that have not already been smothered.

Where bees are moved frequently, a screen made of black wire cloth should be fixed. The cover is removed from each hive and a screen placed on top. A nail at each corner fastens the screen. If the colony is very strong, it is advisable to place an empty shallow or comb honey super on top of the hive, and fasten the screen on top of this. The space thus afforded serves as a clustering chamber for the bees, and is additional security against smothering.

In arranging the hives on the truck for removal, it is advisable to place them with the entrances towards the sides of the vehicle. This will prevent the swinging of the combs. It is desirable to move bees at night, but if this is impossible, a shade should be rigged up to prevent the sun glaring down upon the exposed top tier. See that the load is firmly lashed in place.

Upon arriving at the new location, the hives are placed in position and allowed to stand for a time in order that the bees may quieten down. Then an extra bottom board is placed beside the hive, and the hive lifted gently off the screen and bottom, and set upon the new bottom on the permanent location. Any bees upon the screen are shaken in front of the hive, and the bottom board, thus freed, is used for the next hive.

The bees are now at liberty, and soon make themselves at home, getting familiar with their new surroundings.

PINUS INSIGNIS.

Forest-Grown, 18-24 inch, £1 per 100, on Rail, Melbourne.

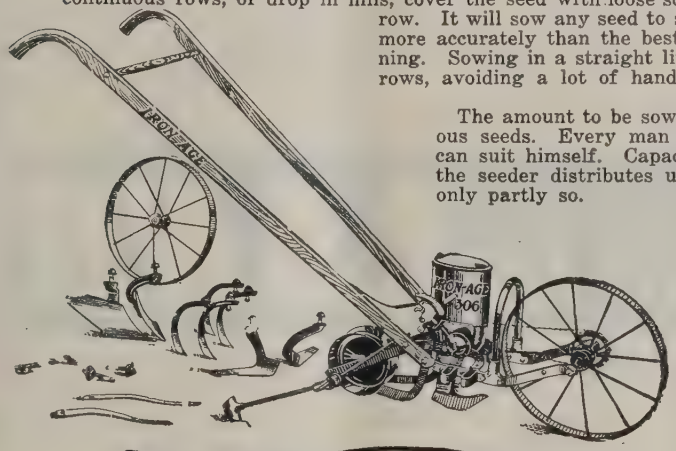
F. G. STIRLING,
Ivanhoe, Victoria.
'Phone: Ivanhoe 234.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HEATY HOUSE." 499 LITTLE COLLINS ST. MELBOURNE.

FOUR IN ONE!

Drill Seeder, Hill Seeder, Double and Single Wheel Hoe

The entire change from Drill to Wheel Hoe, or back again, can be made in about three minutes. Simply remove drill attachment and adjust the cultivating tools. It will open its own furrow, sow in continuous rows, or drop in hills, cover the seed with loose soil, pack it with a roller, and mark the next row. It will sow any seed to size of a French bean. The drill sows more accurately than the best hand planting—saves replanting or thinning. Sowing in a straight line, it allows you to cultivate close to the rows, avoiding a lot of hand weeding.



The amount to be sown is regulated by an adjustment for various seeds. Every man has his own ideas on this point, and he can suit himself. Capacity—The hopper holds two quarts, and the seeder distributes uniformly, whether the hopper is full or only partly so.

A shut-off permits the operator to stop the flow of seed instantly, by means of a cord and ring on the handle. This prevents loss at ends of rows. The man at the handles can see every seed as it drops in the spout. The plough is adjusted in depth by thumb-screw in front. Coverers close the furrow after the seed is dropped.

PACKED WEIGHT, 55lb.

Reduced to £5/15/-

McPherson's Proprietary Limited

582 Collins Street, Melbourne

Apiarists' Annual Conference.

Representative apiarists from every State attended the annual conference of the Victorian Apiarists' Association held in June at the Empire Buildings, Melbourne. The visiting delegates were unanimous in stressing the necessity for the establishment of a co-operative system for the stabilisation of marketing and prices throughout the Commonwealth.

Mr. L. Lowsby, sub-manager, Gippsland and Northern Co-operative Co. Ltd., in giving an outline of the efforts made by co-operative distributing companies for improving the marketing of honey, told conference that with the promise of 70 to 80 per cent. of the supply available in the various States, the companies had formed in England a new company, which was in direct contact with retailers, and had equipment for blending, liquifying, and bottling honey, with a staff chemist to control a uniform blend. At the present, only 200 tons had been exported, but there was every prospect of 500 tons being needed annually, now that the honey was selling well abroad.

Mr. C. E. Cottman, in his presidential address, said there had been heavy losses in bees in Northern Victoria and Gippsland, due to pollen shortage, the losses in many instances being from 75 to 100 per cent. of the hives. With a continuance of good weather conditions, the prospects for the coming season were bright. During the past six months had been greater than for many years past, and prices realised had been particularly good.

He welcomed the interstate visitors, and hoped that much good for the industry would result from the conference deliberations.

WESTERN MARKET.
Trade in Melbourne.

The fruit trade has not been exempt from the general business depression that has been experienced in Melbourne this winter, and a tour of the Western Market confirms the fact.

Mr. H. M. Wade reports that the Apple market is very dead, and there are large quantities in cool storage. Some are now being taken out and sold at a loss. The Queensland citrus supplies are about at an end, but the N.S.W. supplies are commencing to come in, and sales are improving.

Mr. H. Wilson reports good sales of navel Oranges, but Lemons very dull. Apples selling at fairly low prices in large quantities, with a tendency to improvement with Jonathans. There is a shortage of Pines and Bananas.

Reports received by Mr. Wilson confirm previous reports regarding N.S.W. citrus.

There will be larger supplies of common Oranges from N.S.W. this season.

Navels will be a third higher in production than last year, while the estimated crop of Mandarins will equal that of last year.

Tim Young & Co. Pty. Ltd. report Pineapples to be scarce, and medium class are bringing 20/- case. Bananas (a normal quantity of fruit is coming forward for this period of the year), are ranging from 14/- to 28/- case. Small supplies of Victorian Passion Fruit are bringing £2/2/- per case, while N.S.W. navels are bringing up to 15/-. Common Oranges up to 11/- case.

J. H. Young reports Apple sales at fairly low prices. Navels, from 10/- to 16/-; Mandarins, from 10/- to 12/-. Steady demand for Pineapples at 18/- for best counts.

G. Woolf & Sons report good sales of medium navels, while large navels are in little demand. Sales of Pines are slow, owing to high prices. Best Queen Pines bringing up to 24/-.

Silk Bros. report best quality Bananas selling up to 26/- case, and Pines bringing up to 20/- case.

SOME USEFUL RECIPES.

Mince Pie.—2 oz. sultanas, 2 oz. currants, 2 oz. sugar, 1½ Apples, 1 oz. Lemon peel, 1 oz. suet, pinch of spice, ¼ cup of rum.

Chop suet finely, mince Apples and Lemon peel, and mix all ingredients with rum and let stand for at least a day. Line mould with puff paste. Bake in a moderate oven for 25 minutes. Then sprinkle icing sugar on top and glaze.

Raisin Custard Pudding.—Two cups milk, ½ cup sugar, ¾ teaspoon salt, 3 tablespoons flour, 2 eggs, ½ cup seedless raisins, ½ teaspoon vanilla.

Heat 1½ cups milk. Mix sugar, salt, and flour with remaining ½ cup cold milk. Add to hot milk, stirring constantly, and cook on double boiler until mixture thickens. Remove from fire. Add beaten eggs, raisins, and vanilla. Pour into greased baking dish, and bake in slow oven 30-40 minutes—until pudding is firm. Serve hot or cold, with or without whipped cream.

Baked Apples with Raisins.—Five Apples, 5 tablespoons brown sugar, ½ cup seedless raisins, ⅛ teaspoon cinnamon.

Cut around the Apples just through the skin, half-way between the blossom and stem ends. Remove the skin from the upper half, and core the Apples. Mix sugar, raisins and cinnamon, and fill the centres. Put Apples in a making dish, and pour water around them to the depth of ¾ inch, and if there is more than enough of the sugar mixture to fill the centres, add it to the water. Bake in a moderate oven 35-40 minutes, or until Apples are tender. Serve hot or cold, plain or with cream.

LIME FOR THE LAND

Burnt Agricultural Lime (Calcium Hydrate), 20 bags to the ton, assay nearly 80 per cent. CA (HO), per ton on trucks Curdie, including bags, but less 10/- per ton for 11 or 16-ton truck loads.

Unburnt Agricultural Lime (Calcium Carbonate), 12 bags to the ton, assay 92 per cent. (CaCO3), per ton on trucks Curdie, including bags.

All our Limes are well screened, fit for the drill, and suitable for agriculture or top-dressing. Brings up the clover and strengthens the stock.

It is false economy buying a low grade Lime at under 40 per cent. of Lime, because you require twice as much to get the same results as with the above Lime. It means twice the bags, railage, cartage and labor. Therefore, buy the concentrated, and get the results you are after.

Write for Prices, Mention this Paper.

FARMERS AND FRUITGROWERS ARE INVITED TO APPLY FOR COMPLIMENTARY COPY OF "THE FLOCK-OWNERS' FRIEND."

RUDDS' SPECIALTY, "WHITE SWAN" Spraying Lime, in 40 lb. Lever-top Tins. Highest grade, specially selected for Vines and Fruit Trees.

J. H. RUDD & CO. PTY. LTD., 115 William Street, Melbourne

Farm, Orchard and Vineyard

For Immediate Sale

180 Miles from Sydney.

Sydney and Broken Hill passes the Property, comprising 160 acres, 40 acres of arable land, 15,000 table grape vines, Muscatels; 1,600 mixed fruit trees, best varieties for market, just coming into full bearing; remainder of land grass and useful timber. Permanent water, with fish pond. And very suitable for subdividing. Good 6-room Cottage, nice flower garden, also vegetable garden, having an eastern aspect, and well sheltered. Large outbuildings, stable, chaffhouse, one shed, 18 x 15, and one shed, 60 x 15. Large iron packing shed, concrete floor, vermin-proof; fruit grader; one International 3 h.p. spray outfit, new last year. Ploughs, harrows, cultivators. Every implement required is on the place, and all new two years ago. Work tools; four horses, complete harness and waggon; carts for all purposes. One cow, due to calve 8th July. Fowls, and wired-in run. A clean and up-to-date place. No better in Australia.

£6,500 PRICE, WALK-IN, WALK-OUT **£6,500**

Income £3,000, and still going up. Terms can be arranged.

Title C.P. About £80 owing to Crown. £16 per year.

Planting been going on since 1915 until 1925. Property is divided into 8 paddocks.

Three miles from railway station, school, G.P., and stores. Good main road.

Phone 115. W. Forrester, "Winbourne" MOLONG, N.S.W.

Raisin Gingerbread.—½ cup melted butter or dripping, 1 cup brown sugar, 2 cups flour, 1 teaspoon bicarbonate soda, 2 teaspoons cinnamon, 2 teaspoons ground ginger, 1 teaspoon mixed spice, 2 tablespoons treacle, ¾ cup raisins, 1 egg, ½ cup sour milk.

Line a shallow cake tin with greased paper. Sift flour, salt, soda and spices into a basin. Add the sugar and raisins. Pour into the centre the melted butter, beaten egg, treacle and milk, and mix lightly with the dry ingredients. Bake about 45 minutes in a moderate oven.

Orange Sponge Cake.—Two eggs, ½ cup Orange juice, 1 tablespoon Lemon juice, ¾ cup sugar, ½ teaspoon grated Orange rind, 1 cup flour, ½ teaspoon soda.

Beat egg yokes with Orange and Lemon juice until thick and yellow; mix sugar and grated Orange rind, and add gradually to egg yokes; add stiffly beaten egg whites, and cut and fold in flour sifted with soda. Turn into buttered and floured cake pan, and bake in a moderate oven (325 degrees) for 45 minutes.

Raisin Pie.—Two cups raisins, 1½ cups boiling water, ½ cup sugar, 2 tablespoons cornflour, 2 tablespoons Lemon juice, 1 tablespoon grated Lemon rind, juice of 1 Orange, 1 tablespoon grated Orange rind, 1 cup chopped Walnuts.

Cook raisins in boiling water for 5 minutes, pour into it sugar and cornflour, which have been mixed. Cook until thick, remove from fire, and add other ingredients. Bake between two crusts. Walnuts may be omitted if desired. All measurements for this recipe are level.

A NARROW ESCAPE!

(Sir Arbuthnot Lane, a well-known English physician, said the other day that whenever he saw a criminal in the dock he felt certain he was not a fruit eater, or he would not be there. This is how "Toby," in an English exchange, views the matter:—

To think if I hadn't been fond of fruit
I easily might have been
One of the greatest of criminals that
The world has ever yet seen.
I might have bonneted bobbies by means
Of sudden and artful thwacks,
Or, horrible thought, have been base enough
To evade my income tax.

I might take the bottles from people's doors
By milkman trustingly left
In the early morn, aye, and break them, too,
To hide all trace of my theft.

In fact, there's no end to the crimes that might
Be readily done by me,
As wicked as those I've mentioned above,
Or worse, if worse there can be.

But thanks to the fact that fruit every day
In quantities I consume
The noblest and best of mankind I am
As naturally you'll assume.

So take my advice—eat fruit every day,
And shortly you'll descry
A change in yourself that makes you almost
As near perfection as I.

Toby.

Are You Planting Fruit Trees this Season?

If so, do not forget that we have ample supplies to offer.

Trees grown at Kinglake and Yarra Glen

Larger, Stronger, Healthier than ever

Apples.—Jonathan, Five Crown, Rome Beauty, Cleopatra, Granny Smith, Delicious, Democrat, Statesman, etc.

Also Pears, Plums, Peaches, Apricots, Quinces. Best varieties.

We must sell and are prepared to sacrifice the best trees for one season at prices far below the cost of production. Do not miss this chance—

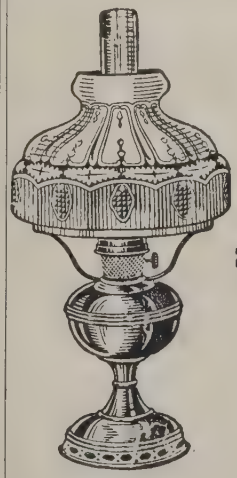
Write now.

JAMES W. LAWREY, Kinglake Nurseries, Yarra Glen

ALADDIN LAMPS

Table and Hanging styles. Make the home bright. Softer and better light than Electric. Keeps your eyes strong. No injurious rays. Light equal to sunlight. One Pint of Kerosene will burn for eight hours. Save their cost.

5/- allowed on old lamps. Miller or any metal-bowl lamps converted to the ALADDIN.



Catalogue Free.

Phone 6645.

THE EDGELL SPRAY PISTOL,

Fitted with the Improved Small Jet.

The most economical Sprayer ever invented. Saves ½ cwt. arsenate of lead in a week's spraying. One man can do the work of two with the Edgell.

Every user testifies to the above facts.

T. W. SANDS, The Melbourne Lamp House

372 Lonsdale Street, Melbourne

The Fruit Trade

Market Reports and News Items

AUSTRALIAN FRUIT IN GREAT BRITAIN AND THE CONTINENT.

Cabled Reports.

Ex the "Moreton Bay" & "Ceramic."

Tasmanian Apples realised the following:—New Yorks, 9/- to 11/- per case; French Crabs, 10/6; others, 8/3 to 9/6; **West Australian** Cleos., 11/- to 11/6; Dunns and Jons., 10/- to 11/-; Chandlers, 10/- to 10/6; others, 9/- to 10/-; **South Australian** Dunns, 11/- to 11/6; Jons. and London Pippins, 10/- to 11/-; others, 8/6 to 10/-.

Ex the "Rotura" and "Cornwall."

New Zealand Apples fetched 12/- to 18/- for C.O.P.; 12/- to 13/- Dunns and London Pippin; 11/- to 12/6 Delicious; 12/- to 14/- Jons.

Ex the "Maloja."

Tasmanian Cleos. brought 9/9 to 11/6 per case; Adams, 9/- to 10/6; French Crabs, 10/- to 12/6; Dunns, 10/6; Ribstone Pippins, 11/-; Sturmers, 9/- to 13/-; Scarlett's and Five Crowns, 8/6 to 10/6; Romes, 9/3 to 10/-; **South Australian** Cleos., 11/6 to 12/6; Romes, 11/-; Dunns, 10/6 to 11/6; Jons., 9/- to 10/-; **Victorian** Jons., 9/3 to 11/-; Five Crowns, 10/6; Newtons, 11/6 to 12/-; and Cleos., 10/-.

Ex the "Devon."

New Zealand Apples fetched Sturmers, 12/6 to 14/-; Delicious, 11/- to 12/-; Jons. and Dunns, 10/6 to 12/6; others, 10/- to 11/6.

Ex the "Woodarra."

South Australian Granny Smiths brought 16/- to 17/-; Dunns, 11/6 to 12/6; Cleos., 9/6 to 13/-; Romes, 10/- to 12/-; Scarlets, 11/- to 12/-; others, 9/- to 11/-.

Ex the "Port Gisborne."

Tasmanian Sturmers realised 9/- to 13/6; Cox's, 16/6 to 18/6; Wellington, 9/6 to 13/6; Cleos., 8/- to 12/6; French Crabs, 9/6 to 14/-; others, 7/6 to 11/6. Easter Buerre Pears, in boxes, brought 18/-; Winter Nelis, 4/9 to 6/3 tray; **Victorian** Josephines, boxes, 17/- to 17/6; Winter Nelis, 20/- to 22/-; half boxes, Vicars, 5/3 to 7/-.

Ex the "Baradine."

South Australian Cleos. brought 11/- to 12/6; Dunns, 11/6 to 12/-; Romes and Jons., 11/- to 12/-; **Tasmanian** Sturmers, 10/6 to 11/-; Scarlets, 10/- to 11/-; New Yorks, 9/9 to 11/-; others, 8/3 to 9/9. **Tasmanian** Josephine Pears in boxes realised 20/- to 25/9; Winter Nelis, 12/6 to 14/- half case; Boscs, 7/- to 8/- tray.

Later Cable:—Further sales of the **Tasmanian** Apples were as follows:—Cleos., 7/6 to 10/-; Scarlets, 8/- to 10/6; Jons., 7/- to 8/9; Sturmers, 9/- to 11/6; Cox's, 13/6, and a few special realised 24/-.

Ex the "Westmoreland."

New Zealand Pears, Winter Nelis, 2/6 to 5/6 tray; Barry, 4/-.

Ex the "Edda."

The balance of the **Tasmanian** Apples sold as follow:—Sturmers, 8/9 to 12/- large and wasty; Cleos., 9/- to 10/6; Jons., 4/9 to 10/6 do.; Scarlets, 7/9 to 10/-; Duke Clarence, 5/9 to 7/-; King David, 5/6 to 7/6.

Ex the "Orama."

Victorian Apples, Yates, 10/- to 11/-; Rokewoods, 9/6 to 11/-; Romes, 9/6 to 10/6; Statesmen, 9/6 to 10/-; Easter Pears, in boxes, brought, 13/- to 16/-; Winter Nelis, 16/6 to 28/-; Keiffers, 18/- to 21/-; and Josephines, 21/-. **Tasmanian** Cleos., and Sturmers, 8/- to 10/6; Romes, 9/- to 9/6; Democrats and Scarlets, 9/9 to 10/6.

Ex the "Westmoreland," "Devon," and "Port Victor."

New Zealand Sturmers, 12/- to 13/-; Delicious, 11/6 to 12/6; Granny Smith, 20/- to 24/-; Jons., 12/- to 13/-.

Ex the "Esperance Bay."

Tasmanian Sturmers, 11/- to 12/6; Rokewood, 11/6 to 12/6; Granny Smiths, 12/- to 20/-; Scarlet Nonpareils, 10/- to 10/6; Jons., 9/6 to 10/-; Easter Beurre Pears, in trays, brought 5/6 to 6/6; Winter Nelis, 7/-; Glou Morceau, 6/6; **Victorian** Granny Smiths, 17/- to 18/-; Pears, Winter Nelis, in boxes, sold at 16/- to 24/-; Josephines, 16/6 to 26/6; Broom Park, 14/6 to 16/-; Winter Cole, 18/- to 21/-; Glou Morceau, 16/- to 24/-; Beurre Boscs, in half cases, 10/6 to 12/6.

Ex the "Naldera," "Esperance Bay," and "Port Fremantle."

Apples shipped per the above steamers are in fair demand. **Tasmanian** Sturmers realised 9/6 to 11/-; Cleos. and Scarlets, 9/- to 10/6; French Crabs, 10/- to 11/6; others, 8/- to 10/-; **South Australian** Sturmers and Cleos. brought 11/- to 12/-; Jons., 10/6 to 11/7; others, 10/- to 11/6. **Victorian** Rokewood, 10/6 to 11/6; Granny Smith, 13/6 to 16/-; Sturmers, 8/6 to 11/-; Scarlets, 11/- to 12/-; Jons., 7/6 to 10/6.

* * *

Hull.

Ex the "Hobson's Bay."

West Australian Granny Smith brought 19/- to 22/- per case; Pears, Winter Nelis, 3/- to 4/- tray; Josephine, 3/3 to 4/-.

Ex the "Port Campbell."

South Australian Apples realised, Jons., 9/6 to 10/9; Cleos., 9/6 to 11/3; Dunns, 9/9 to 11/3; London Pippin, 10/3 to 11/-; Strawberry Pippin, 10/6 to 11/-.

Ex the "Esperance Bay."

South Australian Cleos., 11/3 to 11/9; Jons., 12/-; Romes, 9/6 to 10/9; Rokewoods, 11/9 to 12/-; Stone Pippin, 10/6. **Victorian** Romes, 9/6 to 11/6; Granny Smiths, 14/- to 17/3; Sturmers, 10/- to 11/3; Cleos., 11/- to 12/-; Rymers, 7/- to 9/9.

Ex the "Devon" and "Westmoreland."

New Zealand Apples, Delicious and Jons., 11/6 to 14/-; Granny Smiths, 12/6 to 17/-; Dunns, 10/9 to 11/9; and Sturmers, 9/9 to 11/6.

* * *

Liverpool.

Ex the "Ceramic."

South Australian Jons., 10/- to 11/3; Cleos., 10/6 to 12/-. **Tasmanian** Jons., 9/- to 10/6; Cleos., 9/6 to 12/6; Alfs., 10/6 to 12/-; Cox's, 8/6 to 12/3; others, 7/6 to 10/-. Pears, in trays, Boscs, 4/9 to 6/6; Comice, 4/9 to 7/-; Vicars, 3/- to 3/6.

Ex the "Ulysses."

South Australian Cleos. are selling at 10/6 to 11/9; Jons., 10/6 to 12/3; Sturmers and Romes, 10/3 to 11/3; **Victorian** Cleos., 9/9 to 11/9; Jons., 9/- to 12/-; Romes, 9/- to 11/6; Sturmers, 9/6 to 10/6; **Tasmanian** Cleos., 8/9 to 12/3; Jons., 7/- to 11/-; Sturmers, 8/9 to 11/3.

Ex the "Trojanstar."

Tasmanian Cleos., 9/3 to 12/9; Jons., 8/9 to 13/-; Alfs., 9/- to 12/6; Delicious, 10/- to 14/3; Crabs, 11/- to 14/-; Sturmers, 9/- to 12/-. Pears, in trays: Easter Beurre, 7/- to 7/3; Glou Morceau, 6/6 to 7/9; cases, Vicars, 6/- to 11/3.

* * *

Manchester.

Ex the "Nestor."

South Australian Cleos., 13/- to 14/-; Jons., 10/9 to 12/9; Romes, 10/9 to 12/3; Strawberry Pippin, 10/9 to 11/-.

Ex the "Moreton Bay."

Tasmanian Cleos., 12/- to 14/3; Jons., 10/6 to 11/-; Alf., 13/- to 13/6; Cox's Pippin, 11/- to 11/9; Scarletts and Duke of Clarence, 10/6 to 11/6.

Southampton.

Ex the "Port Fremantle."

Tasmanian Romes, 10/- to 10/6; Dunns, 9/9 to 10/-; Rokewoods, 10/-,

Scotland.

Glasgow.

New Zealand Statesman, sold at 11/6 to 13/6; Sturmers, 10/9 to 12/3; Dunns, 11/- to 12/6.

* * *

Germany.

Hamburg.

The Apples shipped to Hamburg by the "Port Hobart" the "Hochst," and the "Abbekerk," sold as under:—

Victorian Cleos., 11/6 to 15/3; Dunns, 12/- to 15/3; Granny Smiths, 11/- to 14/6; Munros, 11/- to 15/9; Jons., 11/- to 14/3; others, 10/- to 12/6. Tasmanian Cleos., 10/6 to 15/6; Dunns and Munros, 10/6 to 14/3; Jons., 10/- to 14/3; Cox's, 11/- to 14/3; Duke of Clarence, 10/6 to 12/9; Tasman's Pride, 11/- to 13/3; others, 9/- to 11/-. Pears, in boxes, realised:—Boscs, 17/- to 25/-; Vicars, 10/- to 13/6; Clairgeau, 16/- to 17/-; Comice, 15/- to 15/3; and Winter Cole, 15/- to 17/9. The above prices were for sound fruit. A considerable quantity of "wasty" fruit of all varieties ranged from 1/6 to 12/-.

"The Argyllshire"—New Zealand Apples realised:—Delicious, 11/- to 12/-; Lord Wolseleys, 10/6 to 11/-; and Jons., 10/6 to 12/-.

The "Delphic's" and the "Woodarra's" Victorian Cleos., Romes and Dunn's, brought 11/- to 17/-; others, 10/6 to 14/-; South Australian Cleos., 11/- to 16/3; Dunn's, 13/- to 17/-; Jons., 12/- to 15/6; Romes, 11/6 to 16/-.

The "Idomeneus's" and "Port Gisborne's" South Australian Cleos., sold at 12/- to 16/6; Dunns, 12/6 to 16/6; Jons. and Romes, 11/- to 15/-; Statesman, 14/- to 17/-; others, 12/6 to 13/6. Tasmanian Sturmers, 11/- to 13/-; Jons., 11/- to 14/6; Dunns, 13/- to 18/-; Cleos., 12/- to 17/6.

* * *

Hamburg.

Mr. H. G. Colombie, Australasian representative for Algemeene Fruchten Import Maatschappy, Hamburg, reports having received the following cable dated June 23:—

"The cargo of the s.s. 'Edda' has been disposed of, the middle range of prices being as follows:—Jons. and London Pippins, mostly 12/6 to 13/6; Cleos., 14/6; Pearmains, 12/-; Monroes, 13/- to 14/6; other varieties, 11/- to 13/9. Some parcels sold at lower, and some at higher prices, owing to differences in quality, condition, etc."

New South Wales.

Sydney (15/6/28).

Mr. F. Chilton, City Fruit Markets, reports prices ruling as follows:—

The demand for fruit generally is dull, and weather conditions unfavorable for retailers. Heavy supplies of Citrus fruits are now coming forward and prices are practically certain to ease. Large Apples from Tasmania are arriving mostly in a bruised condition, and are difficult to sell.

Queensland fruits.—Bananas, 12/- to 25/- per case; Papaws, 10/- to 18/-; Pines, Smoothleaf, 11/- to 22/-; Ripleys, 9/- to 14/- per half case. N.S.W. fruits.—Bananas, 14/- to 26/- per case; Lemons, 5/- to 9/- per bushel case; Navels, 6/- to 9/-; Mandarins, 5/- to 9/-; Oranges, Main Crop, 4/- to 6/-; Apples, Jonathan, 5/- to 7/6; R.B., 5/- to 8/-; London Pippin, 3/- to 5/-; G.S., 6/- to 10/-; Pears, P.T., 6/- to 10/-; W.C., 5/- to 10/-; Passions, 10/- to 18/- per half case. Victorian fruits.—Pears, Jos., 7/- to 10/- per bushel case; P.T., 6/- to 9/-; Howells, 5/- to 7/-; W.C., 5/- to 9/-; B.B., 4/- to 7/-; Apples, Jonathan, 5/- to 6/6. Tasmanian fruits.—Pears, W.C., 3/- to 5/- per half case; W.N., 3/- to 5/-; Jos., 4/- to 5/6; Giblin, 3/- to 4/-; Apples, Jonathan, 5/- to 7/6 per bushel case; Del., 5/- to 7/6; G.F., 5/- to 6/6; F.C., 5/- to 7/-; N.Y.P., 4/- to 7/-; Arom., 4/- to 6/-; S.P.M., 4/- to 7/-.

Victoria.

Melbourne (26/6/28).

Apples—Good to choice eating, 2/6 to 5/- per case; good to choice cooking, 2/- to 4/6; Lemons, Vic., 7/- to 9/-; Mandarins, N.S.W., 8/- to 10/-; Oranges, Vic., 8/- to 10/-; N.S.W., 6/- to 8/-; Navel Oranges, Murray districts of Vic., good counts, 12/- to 14/-; large, 9/- to 11/-; Murray districts of S.A., good counts, 13/- to 16/-; large, 9/- to 12/-; others, good counts, 10/- to 12/-; large, 7/- to 9/-; Passion Fruit, Vic., 38/-; Pines, Queens, colored and best counts, 13/- to 17/- double case; roughs, 9/- to 11/-.

The Victorian Central Citrus Association reported that the condition of the citrus market was unchanged. Navel Oranges—A quality, special, 10/- to 15/- a case; B quality, special, 9/- to 14/-; C quality, special, 8/- to 13/-; Mandarins, choice, 8/- to 10/-; good, 6/- to 8/-; small unsaleable; Common Oranges, choice, 7/- to 9/-; Lemons, best counts, 8/- to 9/-; rough and large, 6/- to 7/-.

Queensland.

Brisbane (23/6/28).

Lemons, 1/6 to 4/- a half-bushel case; Limes, 1/6 to 3/6; Oranges, 3/- to 6/- a bushel case; Navels, 5/- to 9/-; small, 4/6 to 6/-; Mandarins, Glens, 7/- to 11/-; Scarlets, 5/- to 9/-; Emperors, 5/- to 9/-; Feutrals, 4/- to 6/-; Papaws, colored, 4/- to 7/-; green, practically unsaleable; Pines, rough, 1/- to 4/- a dozen, 3/- to 6/- a case, specials to 8/-; smooth, 7/- to 12/- a case; green, not wanted; Passion Fruit, 5/- to 10/- a half-bushel case; Custard Apples, 2/- to 3/-.

Western Australia.

Perth (19/6/28).

Apples, dumps, Dunns, 12/- to 15/-; special, to 17/-; others, from 10/6; Cleos., 12/- to 17/-; others, from 10/-; Doherties, 12/- to 16/-; others, from 10/6; Granny Smiths, 13/- to 18/-; Rokewoods, 10/- to 14/-; others, from 7/-; Rome Beauties, 13/- to 17/3; special, to 20/-; others, from 11/-; Yates, 15/- to 18/-; special, to 22/6; others, from 11/-; Pears, dumps, 8/6 to 12/-; special, to 14/-; half dumps, to 8/6; Citrus fruits; Navels, flats, 5/6 to 9/-; others, from 4/-; dumps, 8/- to 12/6; others, from 6/-; Oranges, flats, 3/- to 5/6; Mandarins, flats, 10/- to 13/-; special, to 16/-; others, from 8/-; Lemons, flats, 4/- to 7/6; special, to 9/-; Passion Fruit, small boxes, 12/6; Strawberries, 17/- to 20/- per dozen punnets.

Tasmania.

Hobart (23/6/28).

Jons., 2/6 to 4/-; S.P.M., 2/6 to 4/-; S.T.P., 2/6 to 3/9; W.T.P., 2/6 to 4/6; Alf., 3/-; F.C., 3/-; R.B., 3/- to 4/-; Delicious, 4/-; C.P.M., 4/- to 4/6; C.E., 2/- to 3/-; T.P., 2/- to 2/6; other soft and spotty lots in above varieties, from 1/3 to 2/-; Pears, W.N., 4/- to 5/-; N.P., 3/-; G.M., 2/6 to 3/6; spotty and overripe Pears, 1/6 to 2/6.

South Australia.

Adelaide (23/6/28).

Apples, Jons., 6/- per case; Cleos., 6/-; eating Apples, 4/- to 5/-; cooking, 3/- to 4/-; Bananas, 26/- to 30/- per crate; Lemons, 6/- to 7/- per case; green, 6/-; Almonds, 12/- per dozen lb.; Walnuts, 12/-; Oranges, 6/- to 8/- per case; Mandarins, 12/- to 14/-; Navel, locals, 13/- to 14/-; Navel, 14/- to 15/-; Poorman, 8/-; Passion Fruit, 50/-; Pears, eating 5/- to 6/-; Pines, 25/-. Fruit prices are without cost of cases.

SELLING FRUIT IN MELBOURNE

Expert Services Necessary
Facilities Offered by Herbert Wilson
WESTERN MARKET, MELBOURNE

THE SYSTEM of fruit distribution is on a par with the usual activities of commerce. The service of the wholesale commission agent is an essential link in the chain. The fruitgrower is the wholesale producer, who, in terms of commerce, might be regarded as the manufacturer. Then comes the commercial wholesale commission agent who sells to the retailer, who in turn distributes to the public. The retailer who sells to the trade renders practically the same service as the shop-keeper who sells ties, collars, or boots.

The point here stressed, is the service rendered by the wholesale commission agent. It is just here where the grower needs to exercise his discretion.

Wholesale fruit distribution is more intricate than would appear at first sight. The wholesale agent in the first place owes a duty to the grower. In securing the best prices for the grower, the agent has to understand markets and distribution thoroughly, remembering also that the retailer has to carry on his business, and must necessarily make a profit. There is always a meeting ground in the matter of prices, remembering that the trade has to go on steadily year by year. The thoughtful grower does not look for occasional fancy prices, when these in turn may have effect in reducing the flow of supplies to the retailer. It is the good average return for the season which benefits the grower most. Fancy prices often have a boomerang effect.

The wholesale agent must have an intimate knowledge of both wholesale and retail selling. He must understand varieties and quality. He must also have—and this is a very important point—a knowledge of the retailers with whom he is doing business, in order to know where the good "marks" are, and to avoid bad debts.

With regard to organisation, the wholesale agent must necessarily be a good organiser in his own sphere, with an intimate knowledge of capital and finance, the handling of a staff, organisation of inwards and outwards delivery, and generally have the specialised experience to continually conduct a business in perishable commodities, so as to maintain a steady flow of trade.

In submitting the foregoing details, Mr. Herbert Wilson places his specialised knowledge and organisation before the fruitgrowers of Australia. For many years, Mr. Wilson was a Partner in the firm of G. Woolf & Sons, of the Western Market, Melbourne. From his practical knowledge gained over many years of activity in this connection, and having the good-will of the growers with whom he had contact, the time came when he decided to open a business on his own account.

It must be remembered that Melbourne is steadily growing, and the need was felt by Mr. Wilson for providing a new avenue for trade distribution, in which his specialised knowledge could have adequate scope.

Mr. Wilson is esteemed in business and commercial circles, with a lifetime experience behind him in fruit distribution, and possessing the ability to actively conduct an expanding business. He is looking forward to a continuance of the opportunity to enjoy the effects of the good-will of growers in the profitable disposal of their fruit crops. Mr. Wilson is an accredited agent for the N.S.W., Murray Citrus Growers' Co-op. Association, and Victorian Citrus Associations. He has a good knowledge of all branches of the trade and the handling of Apples, Grapes, Peaches, Pineapples, Bananas, in fact all the fruits that are handled in Melbourne.

In thus placing his services before fruitgrowers, Mr. Wilson looks forward to maintaining and increasing his present connections. Growers visiting Melbourne are invited to call and see Mr. Wilson personally at his address in Western Market, 56-58 William-street, Melbourne, and from those unable to call, correspondence would be welcomed. Consignments are solicited in the various States, and growers are notified that the business entrusted to Mr. Wilson will have his personal attention.

EFFICIENCY

IS THE KEYNOTE of successful MARKETING. Efficiency on the part of the grower in growing, grading and packing, and efficiency on the part of the salesman

With 18 years experience in Melbourne Markets I am in a unique position to render prompt service to buyers. This is of utmost importance to growers who consign to me

HERBERT WILSON

56-58 Western Market, Melbourne

City Telephone : M 2012 Private Phone : M 3055

City Address : Box 4003 G.P.O. Spencer St., Melbourne

Do Read the

"Garden Lover"

Write for Sample Copy

to

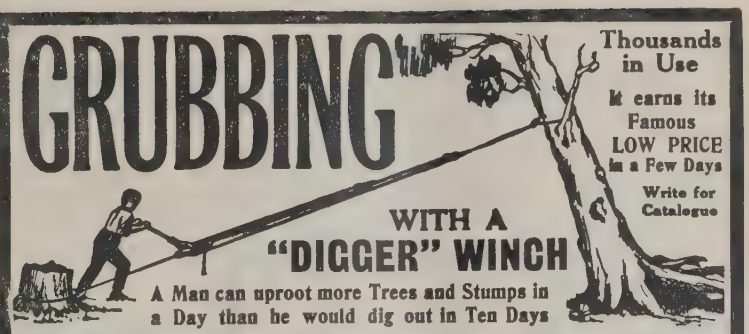
Garden Lover
Box 1944 G.P.O.
Melbourne

GRUBBING

Thousands in Use

It earns its Famous LOW PRICE in a Few Days

Write for Catalogue



WITH A **"DIGGER" WINCH**

A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days

QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

SUPPORT CO-OPERATION

By Consigning your FRUIT to the

Producers' Distributing Society Ltd.

(Late Coastal Farmers' Co-operative Society Ltd.)

Agents for

"BLACK LEAF 40"

and all Orchard Requirements

Melbourne Sydney
Newcastle Hobart
Launceston Devonport

FRANK WALKER

Can offer all leading Export varieties of Apples worked on Seedling stocks, clean vigorous yearlings.

Our New Apple **LALLA** is available for 1928 Season.

Growers of Apples who have not seen this fruit are invited to ask for a sample Fruit Post Free, it stands alone at the top for quality.

PARTICULARS ON APPLICATION

110 BRISBANE STREET, LAUNCESTON, Tasmania.

Fruchthof-Bremen

Fruchthandel Gesellschaft

Scipio & Fischer

Fruchthof BREMEN Germany

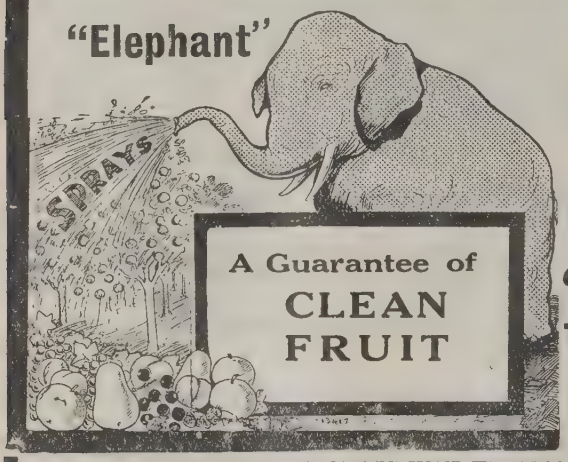
Cable Address: "Orange" Bremen . . . Established 1902

AUSTRALIAN REPRESENTATIVES:

Victoria: The International Fruit & Mercantile Co., 410-416 Flinders Lane, Melbourne.

West Aust.: Messrs. Paterson & Co., Ltd., Perth.

Tasmania: Messrs. E. R. Cottier & Co., Hobart.



ORCHARDISTS

Spraying is essential, and your best Insurance. Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand

Sprays Only

NOW IS THE TIME TO ORDER YOUR SPRAYS.

Use "Elephant" Brand

Prepared Red Oil

Manufactured from a heavy bodied mineral oil, combined with ingredients only necessary to bring about a perfect emulsion when mixed with cold water.

THIS OIL CONTAINS 85% PURE MINERAL OIL.

also

Prepared Crude Oil

ORDER NOW.

Bordeaux Mixture Powder

Equal in quality and Price to the best Imported

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of **"Elephant" Brand Sprays**

Manufacturing Chemists, MADDEN GROVE, BURNLEY, E.1., MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for August, 1928.

Illustrations.

A Loganberry Plantation .. 296

Subjects.

Answers to Correspondents 298
Beekeeping Notes 323–325
Californian Fruit Crops .. 299
Canned Fruits Department 314–5
Citrus Industry, Some Observations 294–5
Citrus News & Notes 300
Codlin Moth Control in W.A. 291–3
Cold Storage 297
Dried Fruits 301–303
Editorial Chats 298
Garden Brevities 321
Insect Pests in the Orchard 327
Interstate News & Notes .. 307–8
Loganberries for Pure Fruit Drinks 296
Manchester as a Seaport .. 317
Markets (British, Foreign & Australasian) .. .. 328–xv.
N.S.W. Notes & News 312
Personal 303
Poultry Notes 323
Queensland Notes 307
Science and the Fruitgrower 318–9
South Australia: News and Notes 307–8
Tasmania: News & Notes .. 309–311
Thoughts for Orchardists .. 326
Vegetable Culture 316
Victoria: News & Notes .. 304–306
West Australia 291–3 307

INDEX TO ADVERTISERS

Books, Publications—
"Garden Lover," Bank House, Bank Place, Melbourne, p. xxv., xiii.
"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii., xxv.

Canning Machines—
Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. xii.
Heine, John and Son Ltd., Sydney N.S.W., p. xxiv.

Cold Storage—
Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—
"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. 319.

Dusting Machines—
Atomol Dusts Ltd., Dumphries Place, Adelaide, p. xxii.

Fruit Buyers—
Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xx.

Fruit Tree Suppliers—
Brunning, John, and Sons, Somerville, p. 290.
Ferguson, F., & Son, Hurstville, N.S.W., p. xxi.
Lawrey, J. W., Yarra Glen, Vic., p. 327.
C. A. Nobelius & Sons, Emerald, Vic., p. 321.
Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 316.
Two Bays Nurseries, Mooroduc, Vic., p. xxii.
Walker, Frank, 110 Brisbane Street, Launceston, Tas., p. xiii.

Fruit Graders—
"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood Vic., p. 324.
"Ellis," D. Harvey, Whitehorse Road, Box Hill, p. 320.

Fruit Picking Bag—
The "Bay View," F. R. Mellor, 440 Elizabeth St., Melbourne, p. 318.

Manures, Fertilisers, &c.—
Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. 317.
Bone Dust, P. Fitzgerald & Sons, Warragul Rd., Oakleigh, Vic., p. xxi.
"Nitrophoska," "Urea," Dyes & Chemicals (Aust.) Ltd., Sydney & Melbourne, p. xvi.
"White Star" Lime, J. H. Rudd & Co. Pty. Ltd., 115 William St., Melbourne, p. 286.

Orchard Ploughs, Cultivators, &c.—
D. Harvey, Box Hill, Melbourne, p. 320.

Orchard Requisites—
McPherson's Pty. Ltd., 532 Collins St., Melbourne, Vic., p. 325.

Patent Attorney.—
Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. 324.

Poultry—
Karswood Poultry Spice, Agents all States, p. 322.

Refrigerating Machinery—
Werner, R., & Co. Pty. Ltd., Richmond Vic., cover iii.

Roller Conveyors—
Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xix.

Spray and Dusting Material—
"Aero" Brand Arsenate of Lead, A. M. Bickford & Sons Ltd., 42-44-46 Currie St., Adelaide, p. 308a.
Arsenate of Lead, William Cooper & Nephews (Aust.) Ltd., Sydney; agents all States, p. xi.
"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. iv.
"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.
"Elephant" Brand, Jaques Pty. Ltd. Madden Grove, Burnley, Vic., p. xiv.
"Swift's" Arsenate of Lead, H. W Peabody & Co., Sydney and Melbourne, p. viii.
"Clensel," Clensel Pty. Ltd., 184 Queen St., Melbourne, p. 321.
Dusting Powders, Atomol Dusts Ltd., Dumphries Place, Adelaide, p. xxii.
"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.
"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. xiii.
"Black Leaf 40," Producers' Distributing Soc. Ltd., Sydney, p. 311.
Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. ix.
"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 326.
"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 309.
Neptune Oil Co., 365 Kent St., Sydney, and all States, p. xvii.

Spray Pumps and Guns—
"Bave-U" Power Sprayer, Russell & Co., Box Hill, cover ii.
"Cooper," Cooper Engineering Co. Ltd., Sydney and Melbourne, p. xii.
604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. xi.
Ronaldson Bros. & Tippett Pty. Ltd., Creswick St., Ballarat, p. xviii.
"Sunshine Sprayer," H. V. McKay Pty. Ltd., Sunshine, Vic., p. xxi.

Strapping Fruit Cases—
Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.
"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. xx.

Tractors—
"Smithco" Friction Lift Co., 110 Sturt St., Sth. Melbourne, p. v.

Transport—
London and N. E. Railway, Burns, Philp & Co., agents, p. v.

Tree and Stump Pullers—
Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix.
"Digger," Quick Manufacturing Co., 78 Pender St., Thornbury, p. xiii.

Wire—
Commonwealth Barbed Wire & Nail Works Pty. Ltd., 94 Sturt St., Sth. Melbourne, p. xxi.

Fruit Trees

for 1928 Planting

APPLES	QUINCES	CHESTNUTS	OLIVES
PEARS	FIGS	GOOSEBERRIES	GUAVAS
PLUMS	CHERRIES	CURRANTS	BRAMBLES
PRUNES	WALNUTS	RASPBERRIES	LOQUATS
ALMONDS	ORANGES	NUTS	PERSIMMONS
APRICOTS	LEMONS	MEDLARS	VINES
PEACHES	MANDARINS	POMEGRANATES	STRAWBERRIES
NECTARINES	MULBERRIES	PASSIONS	RHUBARB
			LOGANBERRIES

All Leading Varieties from—

JOHN BRUNNING & SONS

Somerville Nurseries - - - Somerville, Victoria, Australia

ESTABLISHED 1866

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

HEAD OFFICE:

78a VICTORIA STREET, Melbourne, Victoria.

Address all correspondence to

Box 1944 G.P.O. Melbourne

New South Wales Office: 46 Market Street, Sydney. G.P.O., Box 2147.L.L. FRANK CLARKE, Representative.

Representatives in all States and New Zealand.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

American Office: S. D. McFadden, Pacific Bldgs., Market Street, San Francisco, Cal., U.S.A.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

ADVERTISING AUSTRALIAN FRUIT.

The Fruit Trades' Federation of England is carrying on a most useful work in advertising Australian fruit. We have received from a publicity manager, Mr. Boggan, a set of the posters which have been freely displayed throughout Great Britain. The work is beautifully executed. One poster shows a map of Australia in the top corner, from which are shown coming excellent specimens of Australian Apples, Pears and Grapes. Life is added to the picture by the introduction of a kangaroo—this being a striking and faithful representation. There are other posters, all in colors, and people are urged to buy Australian Apples, "British to the core." There are other posters charmingly designed, and finely executed. The British Fruit Trades' Federation is to be congratulated on the able manner in which it is conducting this campaign.

Doctor: "I can't cure your husband of talking in his sleep."

Wife: "I don't care so much about that, but can't you give him something to make him talk more distinctly."

Successful Codlin Moth Control in Western Australia.

Growers are Saved £43,000 per Annum on Spraying Costs.

No Apples Can be Imported into W.A. from the Other States.

(By Geo. W. Wickens, Superintendent of Horticulture.)

WESTERN AUSTRALIA, with an area of Apples and Pears aggregating 11,022 acres, is unique amongst the Apple and Pear producing countries of the world in the freedom of its orchards from one of the most destructive insect pests affecting pome fruits—codlin moth (Carpocapsa pomonella)—and this article is written to show, first, that this freedom is only attained by constant vigilance and effective action; and second, the need for a continuance of these protective measures. Thus writes Mr. G. W. Wickens, Superintendent of Horticulture for Western Australia.

In 25 years—1903 to 1928—there have been eleven outbreaks of codlin moth in Western Australia, and our fruitgrowing friends in the other States find it very difficult to believe that these outbreaks are each time really due to a fresh introduction of the pest from outside the State, and not to a natural spread of the insects within the State itself. But to anyone who is familiar with the habits of codlin moth and its ability to reproduce its species with great rapidity, it need only be stated that in spite of the fact of the eleven outbreaks quoted above, over 99 per cent. of the area under Apples and Pears in Western Australia has never been affected from date of planting, and this could not be possible if the pest were continuously in the State for a period of 25 years.

In the various infestations which have occurred there have been two distinct features—those between 1903 and 1913, five in number, all occurring in city and town properties, four in Perth and one in Albany; and the remaining six from 1913 onwards all appearing in orchard districts.

The measure adopted in eradicating the pest at Perth was a destruction of the whole of the Apples and Pears as well as the trees in the infested area—the small value of these non-commercial places rendering total destruction the best method to adopt.

At Albany (also a non-commercial area) all Pears and Apples in the infested places were destroyed, and all large trees were cut back so hard that practically no fruit was borne by them the following year.

No recurrence of the pest has occurred in Albany since 1904 and none in Perth since 1913.

In season 1913-14 the first outbreak in a commercial orchard occurred at Katanning, and it was obvious in a country district (which, although not one of the principle fruitgrowing areas of the State, nevertheless contained a fair number of orchards) that the destruction of all fruit liable to become infested, together with the trees, would not be reasonable if other measures of control could be adopted, and **the ordinary routine practice of spraying, bandaging, attention to windfalls and destruction of infested fruit, etc., was carried out with entire success**, the pest being stamped out of the district in the following season (1914-15), after two seasons' treatment, and it has not been seen at Katanning nor within 50 miles of there since that time.

In season 1915-16 codlin moth made its appearance at Bridgetown, in a commercial orchard 30 acres in extent, in the centre of one of the best Apple districts in the State. This outbreak had a greater potentiality for mischief than any that have occurred up to the present time, for within a radius of three miles from the infested place there were 1,100 acres of orchards, mostly Apples, and the planted area near Bridgetown has been greatly increased since then. Fortunately, the pest was discovered before it had time to spread, and it was

eradicated in one season

by the same methods as those employed at Katanning, and no trace of the pest has been seen in the Bridgetown district nor within 50 miles of there since that time.

The unwelcome visitor next made its presence known in an orchard at Caversham in season 1918-19. This time the pest had chosen for its home the centre of the principal vineyard area of the State where Apples and Pears are only grown in small quantities as side lines; it was stamped out by spraying, etc., in that and the following season, and has not been seen within 50 miles of that district since.

The next outbreak occurred at North Dandalup in season 1924-25—a period of six years since the last appearance—and again the good fortune was experienced of discovering it before it had spread to more than one orchard, and it was stamped out by the usual treatment during that and the following season, and has not since been seen within 50 miles of North Dandalup. The reason for specially mentioning 50 miles in each of the instances quoted above is to show, if further proof were needed, that these various infestations are fresh introductions, and are not the result of the pest spreading outward from an infested area within the State.

In December of 1925

the most violent infestation,

so far as numbers are concerned, was discovered at Collie, in small gardens planted around residences in the town. It is no exaggeration to state that caterpillars of codlin moths were present in thousands, some heavily laden Apple trees carrying scarcely one non-infested fruit or fruit from which a caterpillar had not emerged; even Japanese Plums were found to be infested.

Within the town boundary there are approximately 300 of these small places, 81 of which were infested. Outside the town boundary, but within three miles of the town, there are approximately 50 more places planted with fruit trees, 20 being semi-commercial orchards, ranging from two to seven acres in extent, and three of these were infested. Outside these again there are commercial orchards a few miles apart until the thickly planted orchard district at Preston is reached. Under these circumstances it was apparent that destruction of fruit and trees would not be the best method of dealing with the pest in Collie, for this action might easily lead to driving the moths, when they emerged from the pupae stage, further afield to find a suitable place to deposit their eggs, for, as stated above, many larvae had left the fruit before the pest was discovered, and obviously these could not be destroyed by destruction of fruit and trees.

The fact that the

fruit and trees were not destroyed

is specially mentioned here because a deputation comprising some of the principal Apple growers of the State waited upon the Hon. Premier, Mr. Collier, and requested that as the pest had appeared mainly in what are known as "back-yard gardens" so close to some of the principal Apple districts of the State, the only safe treatment was to destroy both fruit and trees.

In connection with the request preferred by the deputation two things are worthy of note. The first is that

when the Departmental viewpoint was placed before the growers they showed such confidence in the judgment of the officers concerned that not a single further protest was raised. The second point is that the officers concerned were sufficiently confident of their ability to handle the outbreak without resorting to devastation, and also that devastation was not the safe method under existing conditions, that they were prepared to take the risk of the obloquy attached to failure. For it can be readily understood if failure had resulted, and the pest had obtained a permanent footing, the opinion would have been strongly held, and freely expressed, that if the Department had taken advice given by growers the pest would have been stamped out.

It will be of interest to mention here the steps taken by the Department to eradicate the pest in the Collie district, and so that an understanding may be gained of the powers provided to deal with such matters, two sections of the "Plant Diseases Act"—one providing for instances when disease is found, and the other to prevent the spread of disease even though no disease is actually present—are quoted, as follow:—

Section 10:—

(1) Whenever an inspector is satisfied that disease exists on any orchard, land or premises, he may by requisition to the owner and occupier or either of them require them or him to do whatever is necessary in order to eradicate such disease from such orchard, land or premises, and to prevent the spread thereof, and the requisition may specify any particular steps which the inspector requires to be taken.

(2) Such requisition may name a time by which the doing of anything thereby required shall be commenced and a time within which it shall be completed.

(3) The owner and occupier, jointly or severally, or the owner or occupier, as the case may be, shall be responsible for due compliance with the requisition, and shall do everything thereby required to be done. Penalty: One hundred pounds.

(4) In case of any default in compliance with the terms of the requisition, any inspector may do or cause to be done all such things as may be necessary in order to carry the terms of the requisition completely into effect, and the expenses incurred in and about so doing shall be recoverable from the person or persons guilty of the default.

Section 14:—

(1) An inspector may, with the approval of and subject to an appeal to the Minister, serve on the occupier and owner of any orchard or place where any plant is growing, or on either of them, a notice requiring them or him to take any measures or do any acts which the inspector may deem necessary to prevent the spread of any disease, and in such case, even although the orchard or place is not infected, any person on whom any such notice is served shall, as soon as practicable after the receipt thereof comply with the requisitions thereof.

(2) In the event of notice being served on both the owner and occupier, they shall be jointly and severally liable to perform the requisitions thereof.

(3) In case of any default in compliance with the terms of the notice, any inspector may do or cause to be done all such things as may be necessary in order to carry the terms of the notice completely into effect, and the expenses incurred in or about so doing shall be recoverable from the person or persons guilty of the default.

An area within a circle having its centre at the Collie Post Office, and a radius of three miles, was taken under Departmental control. All the necessary work, spraying, bandaging, etc., in the small places in the town was carried out Departmentally, and notices of instructions were issued to those outside the town boundaries, who, whether their orchards were infested or not, were obliged to carry out the work at their own expense.

As these notices show, the procedure adopted for stamping out the pest, a copy of the one issued to occupiers of infested orchards is here quoted, and the only difference between it and the one issued to occupiers of non-infested orchards is the enforcement of five sprayings in the former case and four sprayings in the latter.

* * *

DIRECTIONS FOR TREATMENT.

ALL APPLE, PEAR AND QUINCE TREES must be sprayed five times with arsenate of lead, using 3 lbs. arsenate of lead paste or 1½ lbs. arsenate of lead powder in 50 gallons of water.

The first spraying must be applied just when the petals of the blossoms commence falling.

The second spraying must be applied 10 to 12 days after the first spraying.

The third spraying must be applied 14 days after the second spraying.

The fourth spraying must be applied 14 days after the third spraying.

Fifth spraying must be applied fourteen days after the fourth spraying.

All loose bark must be scraped from off the trunks of all Apple, Pear, and Quince trees.

The trunks of all Apple, Pear and Quince trees must be bandaged with strips of bagging or other suitable material six inches in width. After November 1 these bandages must be taken off and examined once every ten days, replacing bandages immediately after examination. All larvae of codlin moth found in the bandages and upon trunks of trees underneath the bandages must be destroyed.

All fallen fruit must be picked up daily and all infected fruit must be boiled.

The land in the orchard must be kept well cultivated and free from all rubbish and weeds.

Before any fruit leaves the orchard it must be examined and passed by an inspector and must be sent only to destinations approved by him."

* * *

It will be noted from the date of the discovery of the pest (December, 1925) the season at that time was too far advanced for effective spraying during the season of 1925-26, and though the area was sprayed and bandaging, etc., was carefully carried out, it was not until the following season 1926-27 that a thorough campaign of destruction could be inaugurated.

In that season

five sprayings with arsenate of lead

(powder form) were applied from September to December inclusive, using at the rate of 1½ lbs. in 50 gallons of water. Hundreds of eggs were to be seen at time of spraying, and many minute poisoned larvae were observed.

In the season of 1925-26 the larvae caught in the bandages and destroyed, when found were far too numerous to be counted. In season 1926-27 in the town area the total number of fully developed larvae found during the whole season only amounted to 30 and the infested places had been reduced from 81 to 13. In the small places and semi-commercial orchards outside the town boundary 53 adult larvae were found during the season.

In the present season 1927-28 exactly the same procedure as last season has been followed and at time of writing, February 11, 1928, not a single larvae has been found in the town; the number of infested places in the whole area has been reduced to one; and in this a weekly search of fruit and bandages has resulted in finding only 13 codlin caterpillars to date.

It will be seen from the above that though the pest is still present in Collie, its end is in sight.

In 1926 another outbreak, but much less severe, and the last to date, was discovered at Narrogin. The same procedure as at Collie has been adopted and the number of infested places has been reduced from nine in 1926-27 season to two in 1927-28, and the total number of codlin larvae found in the latter season up to the present, February 11, 1928, only amounts to 29.

It would be hardly fitting to conclude this article without some reference to what is meant in

a saving of actual cash

to the State of Western Australia by the absence of codlin moth from the orchards. If the pest were prevalent the same as it is in the Eastern States, five sprayings would be needed annually, and as our Apples are not affected with scab (Venturia inequalis) the spraying would have to be carried out for codlin alone, and not as in the east, where some dual purpose sprayings are applied at one time for scab and codlin, so the cost would be attributable to one pest only.

In addition to spraying, all Apple and Pear trees would have to be bandaged and these bandages regularly examined throughout the season.

All fallen fruit would have to be gathered from the ground at frequent intervals and all infested fruit destroyed by boiling.

A conservative estimate for spraying five times in a season, with the extra work outlined above, is £4 per acre per annum.

The area under bearing Apple trees in Western Australia amounts to 7,496 acres, and this would mean, at £4 per acre, an annual cost of £29,984.

Pears are omitted from this estimate because scab (Venturia pyrina) affects this class of fruit in Western Australia, and some of the necessary codlin sprays could be applied at the same time as those now carried out for the control of scab, but an added cost would be incurred in the purchase of arsenate of lead, and in the extra sprayings necessary to control codlin over those used in the State against Pear scab.

In addition to the actual outlay mentioned above the loss due to infested fruit must also be taken into account. The average annual crop of Apples in Western Australia approximates 650,000 cases, and the average annual crop of Pears 88,000—a total of 738,000 cases. In countries where codlin moth has made a permanent home, control measures which result in 90 per cent. of clean fruit are looked upon as good; 95 per cent. is considered excellent and rarely attained. Assuming that Western Australia would achieve the higher result, the loss due to infested fruit would amount to 5 per cent. of 738,000 cases, or 36,900 cases annually. These, at 7/6 per case, would mean a monetary loss to the State in round figures of £13,900.

The direct annual loss, therefore, from money expended in control measures plus the loss due to infested fruit, would amount to £43,784 without taking into consideration the expenditure incurred in treating Pears.

It is worthy of note that the sum mentioned would be sufficient to pay all expenses now incurred in connection with the Fruit Branch of the Agricultural Department for a period of six years.

The earlier portion of this article has shown the necessity for vigilance and efficiency; the latter demonstrates the losses to be expected if codlin becomes permanently established in the Apple and Pear orchards of the State; there is a reason for stressing the possible loss at the present time and it is this:—Western Australia will harvest in 1928 the lightest Apple crop produced for many years past, one that perhaps will not be much in excess of the quantity required for use within the State. This may mean that later in the season, if Apples become dear in the retail shops and barrows, the general purchasing public who are not fully cognisant of the full details of the case may agitate for the introduction of Apples from the Eastern States, where a bumper crop is being gathered, and which both Commonwealth and State Regulations at present prohibit from being sent to Western Australia.

A perusal of the above will surely convince any genuine West Australian of the wisdom of continuing the prohibition now in force.

This article would not be complete without paying a tribute to the great assistance rendered by growers to the Department in a combined effort to keep the State free. Though the instructions have often been both irksome to receive and expensive to carry out, a ready response has always been forthcoming, and not only this, but the growers have done inestimable service in notifying the Department of the presence of the pest—Collie, Narrogin, and North Dandalup, all fell within that category, and it is only this happy combination of growers and officers that has made it possible to head this article "Successful" after experiences covering a quarter of a century.

BEES DESTROY CODLIN MOTH.

An army of winged defenders is going to war against the codlin moth. A species of small bee is taking the hero role in this aerial attack. It is a natural foe of the moth, which it attacks in the egg state.

Normally the number of these parasites is small when the eggs of the moth are most numerous. So a great army of bees has been produced in a laboratory at the Colorado Agricultural College. The parasites are being turned loose at the rate of 250,000 to 500,000 a day throughout the orchard country.—"New York Packer."

IMPERIAL FRUIT SHOW, MANCHESTER, OCTOBER 19 to 22.

The Imperial Fruit Show will be held at Belle Vue Gardens, Manchester, England, October 19 to 27 next. Classes are provided for Apples, Pears, Oranges, Lemons, Grape Fruit, Pineapples, dried and canned fruits.

A special Challenge Cup is being offered for the best exhibit of Oranges grown in the British Empire. The last Imperial Fruit Show, held at Belle Vue Gardens, Manchester, in 1927, was, undoubtedly, from every point of view, the most successful show organised by the present Committee. Fruitgrowers, merchants and retailers attended in greater numbers than on any previous occasion. The attendance of the general public exceeded 47,000. Further particulars are given in the advertisement in this issue.

FRUIT FLY IN TEXAS.

California Takes Precautions.

The outbreak of Mexican Fruit Fly, Anastrepha Ludens (Loew), has caused much concern to the State of California. California's main agricultural industry is fruitgrowing, and their greatest dread is of the Fruit Fly. An investigation of the Mexican Fruit Fly in Texas was recently made by Mr. D. B. Mackie, Entomologist of the Californian State Department of Agriculture. The affected counties in Texas have been placed under quarantine, and methods for eradication are being actively pursued.

News and Notes

Tasmania shipped a record quantity of 2,804,468 bushels of Apples and Pears to oversea markets this season.

Tasmanian hardwood timber interests are alarmed at the increasing popularity of the pine case. Various suggestions have been made for improving the Tasmanian hardwood case in order that its use may be effectively continued.

The Tasmanian Annual Fruitgrowers' Conferences will be held as follows:—Hobart, August 7th; Launceston, August 9th.

Western Australia has been kept free of the codlin moth by constant vigilance. Both Commonwealth and State regulations prohibit the other States sending Apples into Western Australia.

The essential points in the Commonwealth Dried Fruits Act, which was recently made law, are published in a report in the Dried Fruits Section of this issue.

Some Observations on the Citrus Industry of California and of Australia.

Stocks—Bud Selection—Soil Moisture Control—Soil Fertility—Biological Control of Insect Pests—Mass Production and Efficient Packing Houses.

(H. Clifton Rees, B.C.E.)

A Paper Read Before the Recent Interstate Citrus Growers' Conference.

THE CITRUS INDUSTRY is fast approaching the time when it will be necessary to explore export channels for our surplus fruit. For that reason, now is the time to critically examine the industry and prevent, if possible, the serious disorganisation which arises when surplus fruit creats gluts on the local market, and yet cannot be sold profitably abroad.

The present position in regard to the industry appears to be:—

Relatively high costs of production, due to our method of planting the tree and to the exceedingly high mortality rate of bearing trees.

Forty per cent. of our Navel trees, according to experts, are producing "off type" fruit. This, in conjunction with the dozen or so other varieties grown, makes standardisation of tools, plant and modern packing houses practically impossible.

California and South Africa, our principal competitors for the Northern Hemisphere trade, have during the past few years, become highly organised in all branches of the industry. Their research stations are a revelation, while the specialists, scientifically trained, render unique service to growers.

The fundamentals of success

in citriculture are **good trees, soil moisture control, and the maintenance of soil fertility.** To the Californian scientist, with the aid of the growers working on these three fundamentals, the advances which they have undoubtedly made in the industry, are due.

In regard to **good trees,** the names of Dr. Webber and Mr. A. D. Shamel among hosts of others come readily to mind. Their work has helped to establish the standard type fruit, produced through 12 months of the year. The wonderful packing houses, which greatly reduce costs of production, have been a natural result.

"Stock" and faulty "bud selection," according to their experts, account for 10 per cent. of their production troubles. The great bulk of Australian Citrus groves are located on a different stock from the one they use, and this I think accounts for a large percentage of our "off type" fruit.

The argument has been raised that the Australian Navel areas have originated from an inferior bud brought over from the original Bahia tree. There is no evidence to support this contention. How can some of our oldest groves, which are proved good yielders, be accounted for? American experts state that there is no connection between their "off type," known as Australian Navel and Australia.

Bud selection, stock selection, and stock plus variety, for a particular district, are all necessary refinements which should be more emphasised in our industry.

With the exception of two districts, all Californian trees are headed at 28 in. to 30 in., thus saving operation costs, and also as a means of checking disease.

* * *

Soil Moisture Control.

IT IS A CURIOUS FACT that one of the chief benefits to be derived from the growing of crops under irrigation in semi arid regions, is that soil moisture can be kept under control, yet this fact is lost sight of, and instead of controlling soil moisture it controls us; 75 per cent. of production troubles in the Citrus groves of California are ascribed to faulty irrigation methods, and this in a country which has neither drain nor drain pipe in some 250,000 acres successfully producing under a wide range of soil and geological conditions.

Fundamental thought on the movement of soil moisture, which is the very basis of irrigation and drainage practice seems to be at variance in the two countries.

It is not my intention to touch upon these differences in this paper, but on one point that has been under discussion in the press, I will quote A. T. Goldbeck, Chief Engineer, Division of Tests, U.S. Bureau of Public Roads.

"Drainage systems . . . are quite generally ineffective in removing any moisture in excess of free moisture."

It is only by trained supervision that drainage troubles and death of Citrus trees can be overcome and a greater measure of prosperity brought into irrigation areas.

Very careful attention is given to the design and layout of an irrigation block in California. Distribution is mainly through concrete pipe lines. By their system of miners' inches, the water is measured on to each block. Since the irrigator knows the quantity of water received and uses a soil tube, he has become skilful in the use of water.

Undoubtedly more can be achieved by the correct use of water than can be gained by the application of artificial fertilisers. Research work is urgently needed on many questions arising from the wetting of ground.

It is far more important in citriculture to investigate underground conditions rather than by watching the tree above the ground. The economic loss suffered by the fall of Oranges in the spring is largely the result of faulty irrigation practice, and will only be rectified by a change in practice.

To sum up this phase of the subject, the success or failure of Citrus trees in an area is largely a question of how far soil moisture is under control in the area. Control of soil moisture can only be effected by the irrigator using scientific methods, and by supervision throughout the area by experts trained in the "science of irrigation."

* * *

Maintenance of Soil Fertility.

BECAUSE OF THE DURATION of the fertiliser experiments at the Riverside Research Station it would certainly benefit our industry to keep in close touch with the progress reports that are issued from time to time. In so far as these experiments have proceeded, it has been demonstrated that nitrogen is the only element and organic matter, the only other material which has given improvements in yield and tree health.

Soil management problems peculiar to a particular district, disease and pest control, and efficient packing and marketing arrangements are what may be termed local essentials for success.

It is to the **entomologists** engaged by the Citrus industry of California that the world owes most to, in regard to advancements made in the biological control of insect pests. It is hardly necessary to mention such successes as the subjugation of the cottony cushion scale, brown scale, and control of the mealy bug. At the present time, Mr. Harold Compere is in Australia searching for a parasite for the black scale, which is the pest doing most damage in Californian groves. According to reports to hand, he has been successful in his quest, but of course, whether transportation and establishment troubles will be overcome is another question.

Now that the Commonwealth has, by the appointment of a renowned entomologist, brought us into line with other progressive countries, Citrus growers can, with confidence, look forward to the time when control will be established over some at least of the present pests. Australia seems to be the happy hunting ground for entomologists seeking parasites. There are definite signs of

parasites attacking brown scale.

in at least one of our areas recently visited by me. If so, it is to be hoped that their activities will in the near future be considerably increased by the establishment of insectaries and other artificial means.

Just as the tree is the productive unit of the grove and of the industry, so

the packing house

is the marketing unit. The time is rapidly approaching when the industry will depend on the packing house for its success.

From my observations abroad, I would advise growers to become advocates of bigger Citrus areas in mass, all concentrating on one, or at most two standard varieties. Then you would be able to run an efficient shed. The smallest size that the Californian thinks in is a two-car shed per day, i.e., nearly 1,000 cases of 1½ bushels. Quantity of product is required for economic packing results. Standard good quality fruit is also an essential. A packing house manager could not successfully operate a modern packing shed receiving a large variety of fruit from a small area and in the case of Navels with 40 per cent, off type.

Our objective should be:—Areas of sufficient size and producing one variety standard fruit, in other words, the zoning of fruits to maximum economic advantage.

With each district growing type of fruit best suited and under a packing house system, continuity and regulation of supply for marketing is obtained.

Needless to say, this system can only be brought about after much scientific investigation. Greater success can be achieved by considering the Citrus industry of Australia as a whole, under a Federal body. Individual State control cannot bring the same success.

AUSTRALIA'S FOREST POLICY.

Shortage of Softwood Timbers.

Imperial Forestry Conference Opens at Perth on August 21st.

THE Imperial Forestry Conference which opens in Perth on August 21st is fraught with great significance for Australia. Imperial Forestry Conferences are held every five years in different parts of the Empire. Forty delegates from overseas will attend, and they will visit every State in the Commonwealth. Australia's forest conscience needs awakening. The minimum area required to keep the Commonwealth in the reserve and up to the right standard is 24,500,000 acres. So far the forest reservations of Australia only amount to 20,000,000 acres. Victoria's quota is 5,500,000 acres, that the actual quantity reserved is only 4,330,452 acres.

Mr. R. L. Robertson, the Technical Commissioner of British Forestry Commission, stated recently that the provision of softwoods is one of Australia's big forestry problems. He said: "You have been in Australia for an hundred years, and you are still importing large quantities of softwoods. What is going to be a hundred years from now with the huge increase you expect in population? With the world's increasing population and with new uses for timber that are always cropping up, a distinct stringency looms ahead, particularly in softwoods, and that is one of the questions which will be tackled at the forthcoming Conference.

ENGLAND GROWS BANANAS.

The commercial production of Bananas in England is receiving consideration. Messrs. H. Spencer and Son, of Wickford, England, have for a considerable time been experimenting in Banana culture, which they hope sooner or later to place on a commercial scale.

The nine-foot Banana "tree" in a specially constructed hot-house is this year bearing nearly 200 well-developed fruits of a rich yellow colour. This home-grown fruit is stated to be superior in flavour and sweetness to the imported article.

England produces extra choice Grapes commercially under hot-house conditions. Why not Bananas?

Loganberries for Pure Fruit Drinks

Developing an Important Primary Industry and Serving the Public.

Some Timely and Helpful Suggestions.

THERE is no more delightful fruit drink than that made from Loganberries. The drink is fragrant, refreshing and absolutely wholesome. The Loganberry has found a natural home in Australia. Loganberries flourish over a wide range of climate, and substantial crops per acre can be harvested. Berry-growers in the Dandenong Ranges, Victoria, have been earnestly making enquiries as to the possibility of using Loganberries for making pure fruit drinks. There is a firm conviction that if the fresh fruit Loganberry trade could be established it would give a tremendous lift-up to this important primary industry.

In response to a request from the Secretary of the United Berry Growers' Association, the "Fruit World" made enquiries in America as to their methods. Information received from Salem, Oregon, U.S.A., is as follows: Loganberry juice is put up in pure form, undiluted, or diluted with two-thirds water (ready to drink). The undiluted juice is diluted two to one at the time of use. All juice is heated sufficiently to sterilise and then hermetically sealed.

This programme is perfectly simple. It is now being done in a small way by those interested, but it should be easily possible to expand this into an industry. Many householders, when stewing Loganberries in the summer draw off much of the juice, bottle it, and store it for use as fresh fruit drink. There is nothing more delicious.

Loganberry growers have a wonderful opportunity as yet undeveloped in this matter. Preparation should be put in hand at once for giving this a thorough test during the coming season. Growers have already had considerable experience in sterilising and bottling Loganberry juice. A group of those interested should be formed, when plans could be laid, and a programme drawn up. The growers in this worth-while effort to extend their industry and serve the public will surely get the sympathetic and practical help of the Victorian Railway Department. Mr. Clapp and his officers have shown the keenest interest in every effort to assist the development of our primary industries.

By growers getting together now and drawing up a worth-while programme, the way will be clear for an approach to the Railway Department. By making a commencement now in a modest but business-like way, the way would be open for normal developments, when a steadily increasing demand might be expected.

By commencing in this way, a mistake which was made in America can be avoided.

Those who read the "Saturday Evening Post" will remember the large full-page coloured advertisement of the Phez Co. This company put up Loganberry juice in large quantities. They spent nearly half a million dollars in manufacturing and advertising. So great was the demand created, that new areas had to be planted up to secure sufficient Loganberries. In the meantime the company encountered difficulties, and was wound up.

One thing was established, however, namely, that the Loganberry juice became immensely popular. The difficulty experienced in America was that the Loganberry juice cost twice as much to produce as compared with Grape juice. The cost of picking Loganberries is one penny per pound; Grapes can be picked for less than one-tenth the price: then, again, Grapes will greatly outyield the Logans.

But in Australia conditions are different: we have not the same difficulties to contend with, Grape juice not being a competitor with Loganberry juice in this country.

In Salem, Oregon, Logans are now used mostly for canning, and quite a considerable quantity is dried. Mr. Van Trump, the Horticultural Inspector, Salem, Oregon, reports that there are about 2,500 acres of Loganberries in cultivation locally. He states he has known yields of 12,000 pounds per acre, and as low as 2,000 pounds per acre. Perhaps the average yield is 5,000 pounds on good soil, and 3,000 pounds on thin hill soil.

The opportunity is now presented for the growers to make a definite forward move.

A Loganberry Plantation at Mount Dandenong, Vic.

Cold Storage In Australasia

FRUITGROWERS' COOL STORES ASSOCIATION OF VICTORIA.

Annual Conference, Harcourt, August 15 and 16.

THE annual conference of the Fruitgrowers' Cool Stores Association of Victoria, will be held on August 15 and 16, at Harcourt.

The agenda paper is being prepared by the Secretary, Mr. J. G. Aird. The following subjects will be discussed, these having been sent in by affiliated stores.

Consideration of the calling of an Australian Conference of Apple and Pear Growers for the purpose of:—

1. Reviewing the grading regulations.
2. Discussing the adoption of a standard case, both for export and domestic use.
3. Discussing the advisability of a small levy on all fruit exported to provide finance for an Australian Apple and Pear Growers' Association.

List of varieties stored to be recorded, and how each variety stands up under cool store conditions.

Extension of the activities of the Association.

Power electricity.

Apple scald.

Hailstone insurance.

Pre-cooling on a commercial basis.

Self registering thermometers.

Question Box.—Any question handed in to the Secretary, up to the time of the tea adjournment, will be submitted to the Conference for discussion. The identity of the questioner will not be divulged unless desired.

Addresses will be given as follows.—

"Depreciation and Cool Stores Balance Sheets" (Mr. J. W. Barrett).

"The Application of Electrical Methods to Cool Store Problems" (Mr. L. C. Macarthur).

"Temperatures" (Mr. J. Hepburn).

"Economy and Efficiency in a Cool Store" (Mr. J. H. Lang).

A large attendance of delegates and visitors is expected.

Apart from the matters relative to cool storage efficiency, there is certain to be keen interest in the discussion around the subject of eulogising the Association's activities.

Annual Report.

In the annual report, the President, Mr. John Tully, states that success attended the Conference of Engineers and Secretaries of affiliated stores, held last January. The information gained proved of material benefit to the cool store managements.

During the year, the Batlow (N.S.W.) Cool Store had affiliated.

On account of crop failure during the 1927 season, through thrips, the State Treasurer deferred the interest and sinking fund payments, with a proviso that, should the growers have a good crop in any succeeding year, the Treasury would have the right to vary, and request payment of the deferred interest. In view of the fruit crop being heavy this season, and cool storage space being fully utilised, the Under Treasurer approached the Association, requesting payment of portion of the deferred interest. The Association, on behalf of the stores concerned explained that while the stores were overtaxed, fruitgrowers were hard hit on account of the low prices. The Under-Treasurer, while accepting this view, and promising not to make a request for payment this season, stressed the point that Directors of stores should make provision for the liquidation of the deferred interest at the earliest opportunity, either wholly or in part.

At last conference, the question of extending the activities of the Association, was discussed, but consideration was deferred until the Orchard Tax Vote, promised by the Minister for Agriculture, had been taken.

Pre-cooling of Fruit for Export.

The effort made by the Department of Agriculture to have experiments carried out on a commercial basis last season, unfortunately failed for lack of support. If a commercial shipment can be arranged next season, growers will doubtless supply the Apples necessary.

The claim made by the Federated Engine-Drivers' and Firemen's Association, on several affiliated cool stores, has not yet been finalised.

Electric Power for Cool Stores.—This mode of power has been under discussion. Mr. L. V. Macarthur, of the Electricity Commission will deal with this question at this Conference. A general discussion will follow.

Monthly Statistics of Fruit.—Returns are being collected and Secretaries are asked to advise promptly on the first of each month, the approximate quantity of fruit held.

Annual Graph.—As requested, Mr. Barrett made his graph suitable for reproduction. This shows running costs and fuel on a H.P. hour basis. Mr. Barrett further analysed the figures and presented the graph to the engineers' conference, in January last, showing the running and fuel costs on a 250 case capacity hour basis. Copies of this graph have been distributed to each affiliated store. The Association is deeply indebted to Mr. Barrett for the compilation of this valuable information.

The Fruitgrowers' Convention, at Burnley, in June last, decided to wind up the Victorian Fruit Council. It is regretted that there is now no central authority to speak for the industry. It will be remembered that on the formation of the Victorian Fruit Council, at the Portland Convention, your Association decided to link up with that body by affiliating with both the Apple and Pear and the Metropolitan Sections. The Victorian Fruit Council having ceased to function, it will be necessary at this Conference to consider your Association's position regarding affiliation with those bodies.

TASMANIAN COOL STORE.

It is proposed to erect a cool store having a capacity of 50,000 to 100,000 cases at Port Huon, Tasmania. The Development and Migration Commission is being asked for assistance.

BANDING TREES FOR CODLIN MOTH CONTROL.

A new method of dealing with the codlin moth has been expounded by Mr. L. Haseman, of the Missouri College of Agriculture. Bands of cheese cloth are wrapped round the trunks of Apple trees in the spring. The worms gather in these bands, and when a mixture of beta naphthol and engine oil is applied, the result is directly fatal to the worms .

Editorial Chats

FORESTRY CONFERENCE.

ALL interested in Australia's welfare will be following with the closest interest the deliberations of the Imperial Forestry Conference, which opens in Perth on August 21st. In this young developing Commonwealth grave mistakes have been made in the past in our forestry policy, but the damage is not irreparable.

If a far-seeing programme be laid down and the problem tackled courageously, we can to a large extent atone for the mistakes of the past. Fruitgrowers and all primary producers are keenly interested in the subject of timber and the provision for adequate supplies for the future, for which it is necessary that there should be carried out a vigorous policy for reafforestation.

MR. CLAPP IS APPRECIATED.

CITIZENS of the State of Victoria, and fruitgrowers in particular, greatly deplore the unwarranted criticism by politicians of the Railways administration, and of the Chief Commissioner, Mr. Harold W. Clapp.

Mr. Clapp is surely a big enough man to handle the situation, knowing that he has behind him the goodwill of the community. The fruitgrowing industry in particular is under a great debt of gratitude to Mr. Clapp. With his conspicuous ability, his world-wide experience, and transparent sincerity, Mr. Clapp has performed services of great constructive value to Victoria and to Australia as a whole.

Mr. Clapp may be assured, during this troublesome time, when not only his administration, but his motives, are being challenged by men, who by a turn of the political wheel are in positions of authority, that he holds the confidence and esteem of the great bulk of the people of Victoria, and in particular the primary producers. That he will come through this ordeal with credit to himself there can be no doubt, and the public will look forward with confidence to a continuance of Mr. Clapp's splendid services, when the present passing phase of abuse has ceased.

APPLES IN COLD STORE.

1,000,000 Bushels in Victoria.

Big Advertising Campaign Needed.

That there are over 1,000,000 bushels of Apples in cold store, was stated at the recent Victorian Fruitgrowers' Conference at Burnley.

Can this quantity of Apples be profitably absorbed between now and Christmas, remembering the heavy supplies of other fruits on the market?

Growers would do well to urgently consider a comprehensive educational advertising campaign to dispose of the surplus Apple crop.

EXPENSIVE EXPORT SCHEMES.

Cost £12,300,000 for Butter and Sugar.

That the Paterson butter scheme and the sugar bounty cost Australia £12,300,000, was stated before the Child Endowment Commission in July by Mr. P. J. Pringle, representing the Victorian Chamber of Manufactures. The butter and sugar bounty scheme, stated Mr. Pringle, inflated the basic wage by 1/7 and 1/2 respectively, or a total of 2/9 per week. The £12,300,000 thus involved was equal to about half the total of the Federal and State income tax. In view of this enormous tax, which had an important bearing on our present economic position, the question arose as to whether an exportable surplus of butter and sugar was desirable until we brought down our cost of production.

Fruit Production and Marketing in U.S.A. and England.

To give information regarding his recent journey to U.S.A. and England, Mr. R. E. Boardman, editor of the "Fruit World," recently addressed meetings of fruitgrowers at Harcourt and Croydon, giving many interesting details, which were appreciated by the audiences.

WEIGHTS OF FRESH AND DRIED FRUITS.

In answer to a subscriber, Mr. C. G. Savage, Horticultural Superintendent for N.S.W., gives the following information:—

The following weights of fresh fruit (in round figures) are required to produce 1 lb. of dried:—Apricots, 6 lb.; Pears, 4¾ lb.; Prunes, 3 lb.; Peaches, 6 lb.

Answers to Correspondents

TO POISON FRUIT TREES.

"Regular Reader," Hanwood, N.S.W., writes:—What is the most effective and the safest poison to poison Pear trees 14 years old, as they are too hard to pull out? I do not require the land for 12 months.

Answer, by H. W. Davey, Chief Orchard Supervisor, Vic.).—The best method to kill trees without grubbing them out is by means of arsenic, there being some excellent brands of prepared arsenical tree killers on the market.

If your correspondent desires to prepare his own mixture, the following formula is recommended:—Boil 4 lbs. white arsenic together with 3 lbs. washing soda in two gallons of water until the former is dissolved.

The trees should then be frilled all round, and well into the sapwood. This is best done with an axe or tomahawk, after which the dissolved arsenic is poured all around in the frilled cuts by means of an old teapot or similar vessel.

It is advisable to remove stock from land on which trees have been treated.

Answer (by Geo. Quinn, S. Aust. Chief Horticultural Instructor).—With regard to the most effective poison to use in killing Pear trees, I would suggest your correspondent tries the effect of treating them with dissolved arsenic, made up by boiling a pound of white arsenic with 2 lbs. of washing soda in a couple of gallons of water and diluting the solution to make ten or twelve gallons of dressing.

On the trees, make a sort of scarf around the base above the ground by using a sharp axe and cutting into it deeply right round in a ring, levering the bark below the cut open to form a sort of spouting—the poison could be poured gently into this.

The best time to do it would be when the sap is starting to move freely in the spring time. Should heavy rains occur, it may be necessary to repeat the poisoning. Of course, great care must be taken in making and handling such a deadly solution.

GRAPES FOR EXPORT.

"Viticole," Goulburn Valley, writes:—The Wortley Hall Grape has a tough skin and is a long-keeping variety. Is it suitable for export?

Answer (by F. de Castella, Victorian Government Viticulturist).—The Wortley Hall is not, in my

opinion, a Grape that has much future as an export variety. It keeps pretty well in cool storage, although it is somewhat erratic in this respect. This is probably due to its uneven ripening, a peculiarity of this vine being that it bears first, second and third crop almost simultaneously on the same vine. The poor keeping bunches may have been second crop.

Though the berry is large, it is not of first-class flavor, and though very frequently met with in our vineyards, its reception on the Melbourne market has not justified its plantation on a large scale.

This Grape seems to be identical with the sort grown in California, under the name of Black Morocco. It is not extensively planted in that State.

It has been suggested as a good "interpollinator" for Ohanez and other unsatisfactory setters, its progressive blossoming renders pollen available over a very long period. It is also popular with housewives for jam making.

NEXT SEASON'S APPLES.

Can Crop be Regulated?

Two replies were published last issue in answer to "Enquirer's" question, "How can I assist my Apple trees to bear next season, after their heavy crop in 1928?" The following is a reply from South Australia:—

Answer (by J. B. Randell, Gumeracha, South Australia).—Usually after an abundant crop such as has been the general rule this season, the succeeding seasons blooming is light, many trees producing none; there is nothing that your correspondent can do now which will bring a crop of blossom if it is not already on the trees in embryo. Assuming, however, that a sufficiency of soil fertility and moisture has enabled the trees to develop a fair percentage of blossom buds for next season, then good tillage, together with careful spraying to keep all pests and diseases in check, should provide all that is humanly possible towards the desired end. It frequently happens that even when trees bloom after a heavy crop they fail to set any consideable amount of fruit; up to the present the writer has found no means of overcoming this tendency, but opines that if it is within human control it will be found in that system of practice which keeps the trees in robust and vigorous condition. In other words, to assist the trees to carry a crop next season one should have started five or ten years ago, and followed up without intermission ever since.

Californian Fruit Crops.

Satisfactory Harvests Anticipated ∴ U.S.A. Crops also Forecasted.

An interesting report on the conditions of the California fruit crop is to hand from California Co-operative Crop Reporting Service, in conjunction with the U.S.A. Department of Agriculture. The report is dated June 11, 1928.

In presenting these figures, credit must be given to the Government authorities for their skill in compiling the estimates.

The details are as follows:—

Pears.—It is expected that the 1928 production of Pears of all varieties will be about 226,000 tons. Last year the crop amounted to 181,000 tons, while in 1926 a crop of 207,000 tons was harvested. Some tonnage went to waste two years ago. During the past few seasons, about 89 per cent. of the total crop has been Bartletts, and 11 per cent. autumn and winter varieties.

Peaches.—The 1928 production of Peaches of all varieties in California will be about 602,000 tons. This may be compared with 492,000 tons produced in 1927 and 541,000 tons in 1926. Based on the present outlook, it is believed that the total production of Clingstone Peaches will approximate 395,000 tons. In 1927 the total production amounted to 322,000 tons, and in 1926, 327,000 tons. There has been a rapid increase in the bearing acreage of Clingstone Peaches as the present acreage is about 35 per cent. larger than it was two years ago. The production of Freestone Peaches is forecast at 207,000 tons. Last year's crop was estimated at 170,000 tons, and that of 1926, at 214,000 tons.

Apricots.—The June 1 condition warrants a forecast of 173,000 tons of Apricots. This may be compared with 208,000 tons produced last year and 176,000 tons in 1926. There is a fair crop of Royals and Blenheims, but Tiltons are, generally speaking, rather light.

Prunes.—There will be a fairly good crop, about 88 per cent. of the 1927 production.

Oranges and Lemons.—It is still quite early to give very dependable data on the 1928-29 Orange crop. The outlook at the present time is good, however, as the June 1 condition of all Oranges was 95 per cent. of normal. Prospects for Navels and Valencias are equally favorable. Last year, the combined condition was 79 per cent. of normal, with the Valencia outlook somewhat better than that of Navels.

The condition of the Lemon crop is 87 per cent. of normal, compared with 76 per cent. last year, and the 10-year average of 86.

United States Apples, Peaches and Pears.—The condition of the Apple crop in the United States on June 1 was 72.2 per cent. of normal, compared with 57.2 last year, and the 10-year average of 68. There will be no forecast of Apple production until the July report.

The condition of **Peaches** in the United States on June 1, was 72.7 per cent., as compared with 51.8 last year and the 10-year average of 64. The forecast of production indicates a Peach crop of 64,186,000 bushels. Last year's Peach crop in the United States was about 45,463,000 bushels.

The condition of **Pears** in the United States on June 1, was 70 per cent. of normal. This may be compared with 56.9 last year, and the 10-year average of 65.5. The forecast of production indicates a crop of 23,130,000 bushels. Last year the production of Pears was 18,072,000 bushels.

Grapes.—For wine and table Grapes there will probably be an increase on the 1927 crop.

Raisin Grapes indicate good prospects, being about normal at the present time. The outlook for Muscats is good, and for Thompsons excellent. Should this condition be maintained until harvest, the production of Raisin Grapes will also be greater than in 1927.

Below is given the estimated bearing acreage of tree fruits and Grapes in California for 1927 and 1928:—

	Estimated Bearing Acreage.	
	1927	1928
Apples	57,106	57,396
Peaches, Freestone	67,637	69,581
Peaches, Clingstone	74,299	83,959
Pears	56,515	62,521
Apricots	80,710	85,314
Plums	33,458	34,875
Prunes	165,161	172,006
Cherries	11,521	12,641
Figs	45,132	50,513
Olives	25,445	25,903
Grape Fruit	6,223	7,828
Lemons	43,179	42,864
Oranges	185,891	187,281
Almonds	84,445	92,159
Walnuts	75,307	83,252
Wine Grapes	167,019	173,691
Table Grapes	144,524	141,133
Raisin Grapes	346,985	341,725

Citrus News and Notes

Heavy Crop in N.S.W.

SELECTION OF BUD WOOD.

FRUITGROWERS' ORGANISATIONS have for some years been endeavoring to have the matter of bud selection taken up, as it has been recognised that the question of improving the standard of orchards and individual trees in orchards, and the propagation of certain trees of improved quality, and of the right type, is absolutely essential to the welfare of the citrus industry.

About 18 months ago a conference was held between representatives of the Department of Agriculture, Fruitgrowers' Federation of N.S.W., N.S.W. Central Citrus Association, and the N.S.W. Association of Nurserymen. After a number of meetings, definite agreement was reached, and a Bud Selection Committee formed to locate budding wood, and to supply such buds to nurserymen. Considerations regarding the formation of a controlling body to undertake the work of obtaining bud wood, and also of records relating to the performance of progeny trees and their parents, and to handle the necessary financial transactions involved in such work, led to a mutual decision between the bodies mentioned above to form a co-operative sociey.

The Co-operative Bud Selection Society Ltd., has now been registered under the Co-operation Act 1923. Directors have been appointed from nominations received from the organisations concerned; and General Heane, as Chairman, has with him Messrs. H. S. Robinson and A. F. Dunstan, representing the Fruitgrowers' Federation; Messrs. H. G. Such and W. Ritchie, representing the N.S.W. Central Citrus Association, and Messrs. C. W. Rosen and T. Adamson as representatives of the N.S.W. Association of Nurserymen; the Secretary is Mr. E. E. Herrod.

The Directors at the first meeting of the Society, confirmed the appointment of the Bud Selection Committee: Messrs. C. W. Rosen, T. Adamson and H. S. Robinson, with Mr. Ritchie as alternate member, such Committee being assisted by a representative of the Department of Agriculture. The names given comprise actually two Sub-Committees, one to do the Inland Districts of the State, the other to do the Coastal Areas.

The Committee has commenced active operations, and the first field-dav inspection of certain trees, was held recently in the Gosford district. The Committee is now visiting the Murrumbidgee Irrigation Areas.

From information received from the Department of Agriculture it is learned that the movement is being warmly received by growers.

The registered office of the Society will be located at the office of the Fruitgrowers' Federation of N.S.W., and the Society will be glad to render any information available, and looks forward to the hearty co-operation of growers to make the venture a success.

V.C.C.A. ORGANISING TOUR.

After returning from a tour of the Victorian and N.S.W. border Citrus districts, officials of the Victorian Central Citrus Association expressed appreciation for the spirit of co-operation that was everywhere in evidence. The party consisted of Messrs. A. W. Schwennesen (Gonn Crossing), Chairman of Directors of the V.C.C.A., D. Halhed (Merbein), Director; B. S. B. Cook, Manager; C. Mulaney, of the Railways Publicity and Betterment Board, and W. R. Bunker, of the Railways Transportation Branch. Mr. S. A. Cock, Government Citriculturist, joined the party on several occasions, and addressed the growers on cultural matters affecting the industry. An increase in the number of central packing houses was reported, two of the principal being at Riverside and Bamawm.

V.C.C.A. MARKET REPRESENTATIVE RESIGNS.

The Victorian Central Citrus Association reports that Mr. W. E. Branson, who has been representing the V.C.C.A. at the markets for a number of years, has resigned through ill-health. The V.C.C.A. has called for applications to fill the vacant position, which carries a salary of £450 per annum. There has been a large number of applicants for the position, and a selection has not yet been made. Until such time (probably two weeks) as a successor to Mr. Branson has been appointed, Mr. B. S. B. Cook, the manager, will supervise operations at the Western Market.

BIG CITRUS CROP.

25,000 cases of citrus are expected to be packed at Perricoota Station this season. There are 110 acres of Oranges and Lemons at Perricoota and some of the Orange trees, which were planted 50 years ago, are still bearing fruit.

Perricoota is on the N.S.W. side of the Murray river, near Echuca, and is the property of Mr. Rupert Watson.

CITRUS CROPS IN N.S.W.

Record Production on Murrumbidgee Irrigation Areas.

400,000 Cases Expected.

The Murrumbidgee irrigation areas report a very heavy citrus crop, probably a record. It is estimated that the crop around Leeton will be 200,000 cases, and that the crop around Griffith would also be 200,000 cases. There is much activity in the Griffith Producers' packing shed, which handles about 90 per cent. of the citrus fruits from that area. The N.S.W. Central Citrus Association has expressed pleasure at the extensive facilities at the Sydney railway station for the increased sale of citrus fruit.

SUBTROPICAL HORTICULTURE.

How California Trains Students.

We recently received from Mr. G. A. Cook, acting Secretary of the Council for Scientific and Industrial Research, a copy of the syllabus for the summer course in subtropical horticulture, conducted at the Riverside Citrus Experiment Station, Riverside, California, U.S.A.

The course lasts six weeks, and deals with citriculture, subtropical horticulture, diseases and insect pests. Full particulars are obtainable from the Dean of Agriculture, University of California, Berkeley, California, U.S.A.

BUTTIN' IN.

Freddy: "Ma, didn't the missionary say that the savages didn't wear any clothes?"

Mother: "Yes, my boy."

Freddy: "Then why did papa put a button in the missionary box?"

Dried Fruit Department

THE AUSTRALIAN DRIED FRUITS INDUSTRY.

Important Conference at Mildura.

IN order to discuss matters of far-reaching importance in relation to the Australian dried fruit industry, a Conference was convened at Mildura on July 3rd by the Development and Migration Commission, Mr. H. W. Gepp presiding

In his opening speech, Mr. Gepp said there was a world over-production of Sultanas. Dried vine fruits were worth £3,000,000 annually to Australia: 7,000 people were engaged in the industry, and about 40,000 were dependent on it. As the vines planted came into bearing, the Australian production would probably reach 60,000 tons. The United Kingdom was our most important market, but we had to meet competition from U.S.A., Turkey, and Greece. There were great possibilities in Empire trade, but Australian growers and packers needed to increase their efficiency as regards drying, processing, and grading.

Costs of production needed to be reduced: an increased yield per acre would reduce the cost per ton. For packing there were over 80 sheds on the Murray to pack 50,000 tons. Improvements in efficiency and grading would be brought about by a reduction of the packing sheds (many of which were now packing under 100 tons). By such concentration of packing, a saving of £200,000 could be made on a normal pack of 50,000 tons, or £4 per ton.

Mr. J. J. Gunn (Development and Migration Commission) said that through the activities of the Empire Marketing Board, Australia supplied 41.8 per cent. of the total raisin importation into the United Kingdom in 1927. To secure a greater extent of the trade long lines of fruit were necessary from centralised packing sheds. If instead of the 71 agents in Australia and 77 agents in the United Kingdom, there could be one channel for disposal of the fruit, the cost would be reduced from 5 per cent. to 2 per cent.

Mr. H. D. Howie stated he was not in favour of having one big packing and selling organisation. If this were brought about the fine spirit of co-operation between growers and distributors which existed to-day would disappear. If a Committee were formed and the matter handled in the right way, good results could be achieved in twelve to eighteen months.

Mr. D. C. Winterbottom moved in favour of a single co-operative packing and selling organisation, but after discussion withdrew his motion.

A Comprehensive Resolution.

Mr. A. L. Johnstone moved, and Mr. L. G. Driffield seconded, that a Committee be appointed for the purpose of reporting to a later meeting of this Conference on the re-organisation of the dried fruits industry, with a view to reducing the number of packing sheds, and the selling charges, and to bring about a further consolidation within the industry, as may be practicable at the present time, and to provide for any further consolidation as may appear practicable, and to recommend detailed methods regarding the achievement of other improvements within the industry as proposed in the report of the Development and Migration Commission or otherwise.

The Committee to be constituted of the following:—Chairman and convener, Hon. John Gunn; nominee of the Governments of New South Wales, Victoria, and South Australia, representative of Export Control Board, Mr. D. C. Winterbottom (A.D.F.A. co-operatives), Mr. P. Malloch (A.D.F.A proprietaries), Mr. P. T. Berry and Mr. R. A. Haynes (representing agents), Messrs. L. G. Driffield and W. E. Sims, representing non-associated interests, and six growers.

That the Committee shall have the power of co-opting local representatives subject to the decision of the main Committee.

Mr. H. D. Howie moved, and Mr. McGlasson (Berri) seconded, an amendment in favour of three Committees, each of five members, to operate in separate districts. After further discussion, Mr. Howie withdrew his amendment, and the motion was carried.

Committees Appointed.

The six growers' representatives mentioned in the motion were then elected, as follows:—Victoria, Messrs. T. C. Rawlings and A. L. Johnstone (Mildura), R. A. Black (Nyah and Woorinen); South Australia, Messrs. A. C. Wishart and J. B. Murdoch; N.S.W., Mr. L. O'Donnell. Mr. Howie was appointed as the representative of the Export Control Board.

The Committee met immediately, and it was decided to divide the dried fruits districts into areas, and to form two sub-committees—one to deal with the areas in South Australia, and the other to deal with the Murray River areas of Victoria and N.S.W. It was decided that the executive consist of Messrs. J. J. Gunn, J. M. Balfour, and H. D. Howie. It was decided to send a report of the Conference proceedings to the industry in Western Australia, and to the Murrumbidgee areas of N.S.W. At the conclusion of the Conference, Mr. Gepp stated that he and Mr. Gunn were pleased with the spirit of the Conference and the work that had been accomplished. He was confident that definite good would result, and that the stability of the industry would be considerably improved as an outcome of the Conference.

At the instance of Mr. Malloch, a vote of thanks to Mr. Gepp and Mr. Gunn was carried by acclamation.

NEW SOUTH WALES DRIED FRUITS BOARD.

Export Quotas Discussed.

A MEETING of the N.S.W. Dried Fruits Board was held at Sydney on July 16th and 17th. There were present Messrs. G. J. Evatt (Chairman), W. M. Nulty (Murrumbidgee Irrigation Areas), and H. R. Sloan.

Interstate Dried Fruits Conference.

The Secretary reported attending this Conference at Melbourne on June 12th and 13th, which was called to consider the regulations under the Commonwealth Dried Fruits Act, 1928, which provides, inter alia:—

(a) That dried vine fruits shall not be carried from a place in one State into or through another State to a place in Australia beyond the State in which carriage begins unless a licence has been issued under the Act permitting such carriage.
(b) For the licence to be issued subject to conditions.
(c) For the imposition of a penalty of £100 or imprisonment for six months for infringement of the section of the Act providing for the issue of a licence.
(d) For dried fruits which have been, or are in process of being carried in contravention of the Act to be forfeited to the King.
(e) For certain regulations to be made under the Act, including regulations prohibiting:
    i. The conditions (which may include conditions as to the export from Australia of

dried fruits by or on behalf of the person applying for a licence) upon which licences may be issued.

ii. Penalties for any offence against, or contravention of the regulations, or any condition of the licence.

At the conclusion of the Conference the Chairman, Mr. H. Thomson (Acting Secretary, Department of Markets), stated that the proposed draft regulations would be submitted to the Attorney-General; meanwhile they would not be published.

Mildura Conference, July 3rd.—Messrs. G. J. Evatt and H. R. Sloan reported having attended the Conference at Mildura called by the Development and Migration Commission. The Conference was fully representative of the industry. Committees had been appointed to consider the reduction of packing houses, packing charges, and selling agencies. The Committee discussed the various points allotted, made their first report to the Conference, and the Conference was then adjourned sine die.

Soldier Dried-fruit Growers.—Mr. Sloan presented the official report of the Interstate Soldier Dried Fruitgrowers' Conference, held at Red Cliffs on June 6th, 7th, and 8th. Several important addresses were given, and the matters discussed included: Duty on Dates, Empire preference in dried fruits, preference with New Zealand, preference for returned soldiers, publicity for dried fruits, frost prevention, home maintenance area, standard of dipping, etc.

Sultana Export by Proxy.—It was reported that, owing to an adverse season, the dried fruits on the Murrumbidgee irrigation areas were not up to export standard, and the Board considered the proposal that the 25 per cent. Sultana export proportion be fulfilled by proxy, i.e., to sell the N.S.W. fruit in Australia, provided an equivalent amount were exported by arrangement by another State.

The Board granted interviews to the Leeton and Yenda Packing Co.s and the Producers' Packing Co. (Leeton).

The Board had before it:—(a) A resolution carried at a meeting of Leeton Sultana-growers, stating that in the event of their export quota not being passed for shipment by the Commonwealth, they cannot be called upon to export their quota by proxy; (b) a letter from a grower at Yanco, refusing to allow export by proxy, and that as the Commonwealth would not pass his fruit for export, he could do what he liked with it.

The Board noted that no evidence was submitted that the whole of the M.I.A. fruit was unsuitable for export, and that an application to ship to N.Z. was being considered by the Commonwealth.

It was decided to obtain legal advice regarding export by proxy and export quotas generally.

Dried Fruits Insurance and Relief Scheme.—Consideration was given to the scheme formulated by Mr. Mowbray Chapman, of England, to assist growers suffering from any future frost visitation. The plan includes the passing of an identical Dried Fruits Industries Insurance Act for a compulsory levy of 1/- per cwt. As this matter will probably come before an Interstate Conference shortly, no action was taken in the meanwhile.

N.S.W. Dried Fruits Processed in Victoria.—A statement was submitted showing that 333½ tons of N.S.W. dried fruits were processed at Mildura, and 208½ tons at Nyah. This fruit, being subject to the N.S.W. levy, it was excluded from the Victorian levy.

Price-fixing.—A suggestion from Mr. Nulty that maximum prices be fixed for wholesale and retail trade was referred to the next Interstate Conference.

OVER PRODUCTION OF GRAPES IN CALIFORNIA.

California Grape industry is confronted with a serious problem of disposing of an annual tonnage much in excess of the present capacity of the market to absorb at profitable prices, according to the conclusions reached in a report entitled "Marketing California Grapes" recently completed on behalf of the California Vineyardists' Association by the Metropolitan Life Insurance Company, the University of California and the State and Federal Departments of Agriculture. The report recommends, however, that a solution of the growers' problem be attempted by a concerted programme of market expansion and improved methods of distribution, rather than by liquidation.

Grape acreage, it is pointed out, has increased from 200,000 in 1919 to 700,000 in 1927; production from 1,000,000 tons to 2,400,000. This vast expansion has not been properly paralleled by efforts of organisation and market expansion. The return to the grower of Grapes has decreased in proportion to the increase in production.—"California Fruit News."

NO DAMAGE TO GREEK VINEYARDS.

The reports of considerable damage to the vineyards of Greece by recent earthquakes, are unfounded. Exports of dried fruit will not be affected.

BRITISH IMPORTS OF RAISINS.

A very large increase, both as to the quantity imported and the amount entered for domestic consumption, is recorded in the British trade returns respecting dried Raisins during the first three months of 1928, contrasted with the same period in either 1927 or 1926. This result may be fairly attributed to the extensive expansion in imports from the United States, which rose from 3,952 short tons in 1927 to 7,692 short tons this year. Supplies from Australia likewise increased by a relatively heavy proportion—to 2,718 short tons from 819 tons in 1927.

The net result was an aggregate of imports amounting to 12,169 short tons against 6,920 tons a year ago and 8,079 tons in 1926. Substantially the whole of the imports were retained for domestic use. Entries for domestic consumption of dried Currants rose this year to 11,439 short tons against 10,551 short tons in 1927. There would appear to have been an increase in the use and popularity of dried fruit within the past few months. In respect of Raisins this may well be due to the campaign of advertising which has been carried on now for some considerable length of time.

NO PREFERENCE IN NEW ZEALAND FOR AUSTRALIAN DRIED FRUIT.

The failure of the Commonwealth Government to bring about a preference for Australian dried fruit in New Zealand, was referred to at length by Mr. D. C. Winterbottom, at the interstate conference of returned soldiers.

It was extraordinary, said Mr. Winterbottom, that New Zealand had granted preference to South Africa with regard to dried Apricots and Peaches, yet could not see its way to grant preference to the products of an Australian industry that did not compete with the products of New Zealand.

Australian growers wanted a sheltered market in New Zealand to protect them from the ruthless selling of America. Many goods that come into competition with American goods, that

are sent to the United States, have a prohibition order placed against them.

Californian Raisins are absorbing over 2,000 tons of the N.Z. market, and with preference granted to us we would and could supply that amount, but cannot compete at the prices at which they are now selling.

On the principles of Empire Preference, as set out by the Imperial Economic Committee, New Zealand should grant Australian dried fruit preference over America.

DRIED FRUITS PACKING SHEDS.

Reduction at Kyabram and Tongala.

Mr. J. M. Balfour, Chairman of the Dried Fruits Control Board, said recently that it was unnecessary to have four packing sheds in the Kyabram and Tongala districts for packing 76 tons of dried fruit. The Dried Fruits Board, after consulting with the Department of Markets, decided that only one packing shed should be registered, and that a licence would only be granted to Mr. R. K. Wood's shed. Mr. Wood stated he could handle the pack, provide boxes and wiring, and deliver to the Kyabram railway station for £6/10/- per ton. The foregoing was mentioned at a meeting of the Goulburn Valley Dried Fruits Association, and the meeting approved of the Board's proposals.

GOVERNMENT ADVANCES NOT REPAID.

£200,000 "Written Off" Dried Fruits Industry.

Before the Dried Fruits Conference at Mildura on July 3, Mr. H. W. Gepp, Chairman of the Development and Migration Commission, stated that in 1924 the Commonwealth Government advanced in loans the sum of £200,000, and that this amount had to be practically written off.

DRIED FRUIT PRICES.

In answer to "Subscriber," Mildura:—The dried fruit prices fixed by the A.D.F.A. for 1928, were:—

Currants.—4-crown, 8½d.; 3-crown, 8¼d.; 2-crown, 8d.; 1-crown, 7½d.

Sultanas.—5-crown, 10¾d.; 4-crown, 10¼d.; 3-crown, 9½d.; 2-crown, 9¼d.; 1-crown, 8¾d.

Lexias.—5-crown, 7½d.; 4-crown, 7d.; Muscats, 6¼d.

AUSTRALIAN PRODUCE IN ENGLAND.

Butter: Meat: Fruit.

Too Much Concentration on London.

Before the Melbourne Constitutional Club on July 5th, Major H. S. Cole, representative of the London and N.E. Railway, gave some interesting information regarding the disposal of Australian products in England.

The spirit of Empire co-operation, said Major Cole, was vital, both from the standpoints of sentiment and commerce.

The primary industries were of first importance to Australia: secondary industries should be a natural development. England was an enormous market for primary products, but under present conditions the Dominions were not fully supplying the market there. Australia must accept world parity. Reciprocal trade arrangements were vital. England could buy all the canned fruit and dried fruit that Australia could produce. In the canned fruits industry the costs had increased disproportionately. Though subsidised by the Government, the position was still unhappy. Wages had increased from 30/- a week in 1912 to 86/- now: sugar had increased from £18 a ton in 1914 to £30/6/8 to-day. In 1916 Australia was manufacturing 33 1-3 per cent. more jam than her present output, and an export surplus of 44,000,000 lbs., as compared with 2,300,000, was marketed overseas.

In appointing only six London agents to handle the canned fruit under the Canned Fruit Export Control scheme, Australia had been put in unfavourable competition with California for the Midland and Northern markets. The traders there would not act as co-agents with the London appointees because they received their full commission from California.

Round Liverpool, Manchester, Hull, and the other places served by the London and North-East Railway, there was an enormous area of distribution: the bulk of the population was there, yet the bulk of our produce went to London. Why? This was a marketing blunder, apart from the additional freight and handling charges. In the year 1926-27 the Danish people, on average top prices, secured 17/6 a cwt. more for their butter supplies than did Australia, and even New Zealand secured 2/9 a cwt. more than Australia. New Zealand marketed a very considerable proportion of her butter under one label. About 75 per cent. of the butter from Australia lost its identity. Not only did Australian butter lose its identity, but a minimum of 3/- per cwt. was added to its cost in railway transit on that proportion consumed in the provinces.

At present Australia confined its meat export to London and Liverpool. The markets of Leeds, Hull, Bristol and Liverpool always yielded more than the London market price, but Australia did not send anything like a reasonable proportion of its products to those outer ports.

The London and North-Eastern Railway Company, continued Major Cole, were particularly interested in the development of their three Humber ports, viz., Hull, Immingham, and Grimsby; Hull being the chief of these, and of the United Kingdom ports, ranking third in importance, whilst at the same time being the cheapest. Hull not only possessed excellent shipping facilities with all Australian States, but also possessed better shipping facilities with the Continent of Europe than any other U.K. port, and was thus the best port to cater for the development of trade with the Continent, where direct shipments were impracticable.

Hull's fruit market ranked next in importance to London, and, generally speaking, a higher range of prices existed on that market as compared with either London or Liverpool. Australians would be well advised in their own interests to make greater use of that market for the sale of their fruit.

PERSONAL.

By the hearty reception accorded to Mr. W. H. Everard, M.L.A., at the annual conference of the Metropolitan Fruitgrowers' Association, it is quite evident that there is sincere appreciation for Mr. Everard's untiring services to the fruit industry. It is a pleasure to note that Mr. Everard is as vigorous as ever in his determination to push forward every useful enterprise of service to the industry.

Major H. S. Cole, representing the London and N.E. Railway, is showing much activity in assisting the export trade from Australia to England. It was his idea that special coaches to display Australian produce be attached to the trains conveying the Australian Scottish delegation. This has proved to be one of the best advertisements that Australia has yet received. During five days, 15,100 people saw the exhibits at Edinborough alone, and this was only one of the many centres at which these coaches were on display.

Victoria

Growers' Conferences ∴ News and Notes.

METROPOLITAN FRUITGROWERS' ASSOCIATION.

THE ANNUAL MEETING of the Metropolitan Fruitgrowers' Association was held on July 5, at Box Hill. Mr. R. M. Finlay, Diamond Creek, presided over an attendance of about 60 growers. There were also present: Messrs. J. Cain, M.L.A. (Assistant Minister for Agriculture), E. W. Greenwood, W. H. Everard, and G. Knox, Ms.L.A., J. M. Ward, Superintendent of Horticulture, and G. B. Minns, Market Superintendent.

In opening the Conference, the Minister said that the days of individual effort in disposing of fruit were gone. We must have co-operation, but those who obtained privileges through organisation should be prepared to pay for them; the orchard tax was regarded as the only method of making all the growers contribute to the organisation of the industry.

Mr. E. W. Greenwood, M.L.A., said that when good prices ruled for any particular fruit, there was a rush to plant such varieties. The present rush to plant Apricots might result in a glut later on. There should be more scientific exploitation of the local market.

Mr. G. Knox, M.L.A., while supporting the orchard tax, said that the growers should have a say in the administration of the tax, and the manner in which the money should be spent.

Mr. W. H. Everard, M.L.A., in supporting the vote of thanks to the Minister, said that 40,000 bushels of fruit a year were sold at kerb markets; there should be four times as many of these kerb markets operating. Fruit barrows near the railway station should not be forced to close at 7 p.m. for five months of the year. The Metropolitan Association had done good work in years past by assisting to secure the appointment of a Superintendent of Horticulture, and the reopening of the city fruit shops which had been closed by restrictive legislation.

More scientific Research work should be conducted. With regard to the proposed orchard tax, it was necessary that the funds which collected should be received and administered by the growers and not the Agricultural Department.

Replying to a vote of thanks the Minister said he saw no difficulty in renewing the grant of £200. (Applause.)

The annual report, which was adopted on the motion of the President, stated as follows:—

Proposed Export Control Bill.—A resolution was carried at the last annual meeting, viz.: "That growers having a vote, be impressed to exercise same to strenuously oppose the Bill coming into operation. At the poll taken, growers showed very decisively their opposition by rejecting the Bill."

Orchard Tax.—This hardy annual comes up for discussion at every Conference and is still in the prospective. All sections of the industry have agreed to a levy on an acreage basis, and the Minister has promised that before any registration becomes law, a poll of growers will be taken to be decided by a simple majority.

Every Day Markets.—Your Executive supported the Markets Committee in opening the Victoria Market six days a week so as to provide stands for growers who have been on the waiting list for years, for the summer months, when soft fruits were marketed. The new order proved a great success. How it will succeed during the winter months, time will decide.

Six O'Clock Opening — Has been in operation for three months. Opinion is divided—fruitgrowers being largely in favor, market gardeners and retail fruiterers' Associations being against, your Executive are of the opinion it should be given a further three months' trial.

Among many other subjects dealt with were:—Duty on crude oil; amendment of Seeds Advance Act; retaining the services of Mr. Brittlebank; insurance of fruit against hail; co-operating with Markets Committee re delivery of fruit from Victoria Market; re uniform case for overseas. An endeavor to have broadcast the value of fruit as a diet.

Kerb Markets.—The past year has been a busy one, not only have new markets been opened, but those operating had to be built up owing to the failure of fruit the previous year. At present there are nine, disposing in the aggregate over 1,000 cases each week, also a large amount of vegetables and dairy produce. Our work is hampered to some extent through many of the municipalities being opposed to kerb markets, in several cases arrangement has been made with private owners of land, but we would much prefer the co-operation and support of municipalities generally. We feel sure when the system of direct trading, bringing the producer and consumer together, is more generally adopted, the question of over supplies and gluts will be to a large extent solved.

The balance sheet showed receipts £254/2/1, including the Government subsidy of £144/19/2. The expenditure was £214/19/6, leaving a credit balance of £39/2/7.

Fruit Barrows near Station.—Mr. Minns, Superintendent of Markets, said that the Railway Commissioners desired the cancellation of the licences of the barrowmen in Swanston-street, Melbourne, alongside the Flinders-street Railway Station, as the Department proposed to extend their fruit stall, to serve not only railway passengers on the main concourse, but also the general puplic passing along the railway frontage in Swanston-street. It had been said the Railway Department sold fruit cheaper than the barrows, but on examination this was found not to be the case. If, however, the Railway Department pushed their claim they had the right, under an agreement, to do away with fruit barrows on railway frontages.

Mr. J. Tully moved that the City Council be supported in its endeavors to have the fruit barrows retained in Swanston-street. Mr. W. A. Webb seconded. Mr. Bull said it would be a pity to go against Mr. Clapp, who had rendered great service to the industry. Would it not be possible for the barrows to be moved further south along Swanston-street?

Export of Pears.—On the motion of Messrs. Tully and Lipscombe, it was decided to request the Executive to take active steps to increase the export of Pears. Messrs. John Stevens and A. F. Thiele spoke in support. In the discussion it was stated that such Pears as carried to England safely realised good prices, but too many Pears arrived in an unsatisfactory condition. When Pears were pre-cooled and sent under the auspices of the Growers' Pear Export Committee, success had been achieved.

Apple and Pear Growers.—It was decided to make a special effort to secure the membership of Associations which were previously affiliated with the Apple and Pear Growers' Association.

Appreciation of Secretary.—Appreciation was expressed for the services of the Secretary, Mr. J. W. Aspinall. It was decided to increase his salary by £50 per annum.

Chamber of Agriculture.—It was decided, on the motion of Messrs. W. A. Webb and A. F. Thiele, to affiliate with the Victorian Chamber of Agriculture. Mr. Lechte spoke of the good services rendered by the Chamber.

City Fruit Shops.—Reference was made to the barrows outside Flinders-street Railway Station having to cease selling fruit at 7 p.m. four nights per week, from May to September; as these were within the city area, it was decided, on the motion of Messrs. Webb and Lipscombe:

"That with regard to the sale of fruit in the City of Melbourne, the Government be asked to amend the law by proclaiming that on the south side, the boundary be the River Yarra, and not the north side of Flinders-street as at present."

Office-bearers were elected as follows:—President, W. Mock; Vice-President, L. Pepperell; Executive: R. M. Finlay (Diamond Creek), J. Lorimer (Diamond Creek), J. Tully (Doncaster), W. A. Webb (Doncaster), J. Stevens (Vermont), W. T. Sellars (East Burwood).

Proposed Orchard Tax.—Opinions for and against the proposed orchard tax were expressed. It was decided to ask the Executive to prepare a statement setting forth the proposed allocation of the funds when raised, in order to educate growers as to the benefit to be derived. Mr. Bull (Doncaster) said he feared that if a poll were taken now, a negative vote would be cast.

Rural Bank.—It was decided to request the Government to enact the Rural Bank Act during the present Session.

Cordial thanks were expressed to the retiring President, Mr. R. M. Finlay, and to the two retiring members of the Executive, Messrs. W. Lipscombe and W. Cook.

VICTORIAN FRUIT COUNCIL.

Further to the report of the recent Fruitgrowers' Victorian Conference at Burnley (at which the Fruit Council was disbanded), the following resolutions were carried:—

"That the Minister for Markets be asked to convene a conference of representatives of the State Governments, shipping companies, shipping agents, and growers of all States, to discuss problems confronting the Apple and Pear export industry." (J. W. Bailey, R. Webb.)

"That this Convention oppose any increase in the duty on arsenate of lead." (W. Young, A. F. Thiele.)

"That this Convention recommends the use of the standard (Canadian) case for export overseas. Dimensions inside measurement, 18 in. x 11½ in. x 10½ in." (J. W. Bailey, H. C. Wilson.)

"That the Queensland fruit merchants be asked to reduce their rate of commission from 10 per cent. to 7½ per cent." (J. H. Lang, H. C. Wilson.)

"That a protest be made to the Exporters' Handling Committee against the action of a firm of export agents, in circularising growers that they intend to charge 1d. for supervision, in addition to the 3d. per case and out-of-pocket expenses hitherto charged; and that they intended to make the charge retrospective, making the deduction of the extra penny on the account sales for the past season as they come to hand." (S. W. Smith, C. P. Nobelius.)

At the conclusion of the business, a hearty vote of thanks was passed to the Department of Agriculture for making available the services of its experts and the Burnley School, also to Mr. Jessep, the principal of the school, and the press.

The addresses were not given by Mr. Read and Mr. Levick, owing to the lateness of the hour, but both gentlemen promised to make them available for publication in the "Fruit World."

APPLE AND PEAR GROWERS ORGANISE.

At a dinner, recently, Mr. H. G. Colombie, Australasian representative for several of the leading European fruit brokers, suggested that an organisation be formed of the growers and shippers using the services of his principals, as it was thought that this closer co-operation would benefit all those interested in the industry.

The suggestion was then very favorably received. Acting on numerous requests, Mr. Colombie called a meeting on July 12, at the Commercial Travellers' Association, which was attended by some 30 representative growers and shippers, using his overseas organisation. Various phases of the industry and certain improvements which it is desired to bring about, were reviewed and examined.

It was decided to form an organisation called "The Victorian Fruit Marketing Association." It was resolved that whilst it will, for the moment, confine its attention to exports, the Association will, in time, deal with the interstate and local aspects of the industry.

Many of the growers present came as representatives of their districts, whilst others attended in their individual capacity. All those present became foundation members, and it was agreed to admit all those connected with the industry, provided they subscribe to the objects, and suggested constitution of the organisation.

The Association is prepared to admit all growers of deciduous fruits, but, as stated, for the moment, the aims of the organisation will be concentrated on the problems facing the exports of the Apple and Pear growers.

A provisional Committee of growers and shippers was appointed as follows:—Chairman, Mr. H. G. Colombie; Committee, Messrs. Geoff. Brown (Red Hill), F. Thomas (Bunyip), Reg. Smith (Croydon), J. W. Bailey (Narre Warren), S. E. Scott (Dennys, Lascelles & Co.), F. Cave (F. Cave & Co.), A. G. Lester, and A. S. M. Harrison, I.F.M. Co. (Secretary),

The membership fee has been fixed at 2/6 per annum, and a small levy per case may be made on fruit exported, but as the expenses should not be large, this levy is not likely to exceed a fraction of a penny to the growers, as shippers will contribute a like amount. Meantime, the shippers have agreed to bear all expenses incurred between now and next shipping season, so that, apart from the fee of 2/6, growers will bear no expenses until next season.

All members will be able to attend general meetings, and vote on a basis of the quantity exported in each preceding season. The basis suggested being 1 vote for every 100 cases exported. Growers who have sold their fruit will also be able to participate in the same manner. Growers and shippers may come personally to exercise their votes, or appoint proxies, or growers in any district may join together and appoint representatives to act and vote on their behalf.

Growers and shippers will be given the opportunity of expressing their views on the various phases of the industry, and of suggesting or initiating such reforms as they consider will be of general benefit. The Executive Committee will take the necessary steps to have such resolutions carried into effect.

All shippers and growers of deciduous fruits can apply for membership, whatever be the form of their

export, whether sold or consigned and irrespective of the overseas receiver to whom the fruit was, or will be, sent, or through whoever it was, or will be, shipped in Melbourne.

The interests represented at the initial meeting held on July 12, controlled one-third of the total exports from Victoria in 1928, and it is hoped that all those interested in, and desirous of improving the industry, will join the organisation.

Provision will be made in the organisation, for an arbitration panel, to settle matters in dispute.

The Committee will pay regular periodical visits to the various districts to acquaint themselves firsthand with the problems facing orchardists, and take the necessary steps to bring about the desired improvements.

Further particulars may be obtained from Mr. H. G. Colombie, Temple Court, Melbourne, or from the Secretary, Mr. A. S. Harrison, of the I.F.M. Co., Flinders-lane, Melbourne. They will also be pleased to arrange for members to address local meetings in districts where a number of growers desire to obtain fuller information.

The complete cessation of the planting of canning Peaches for two years is advocated by Mr. V. R. McNab, Chairman of Directors of the Ardmona (Vic.) cannery.

ROYAL AGRICULTURAL SHOW.

Melbourne, September 20—29.

Bigger Than Ever.

AN advance copy of the schedule of prizes from the Royal Agricultural Society of Victoria comes as a reminder that their great annual fixture is near at hand.

The show opens on Thursday, September 20th, and concludes on Saturday, September 29th. There is every indication that the show will be bigger and brighter than previous years, and will draw crowds from every part of the Commonwealth.

Many improvements have been carried out since the last show, the most important being the erection of administrative offices at a cost of £30,000. The new building is of concrete, and the ground floor is enclosed by modern shop fronts.

Of special interest is the fruit sections, entries for which close on Saturday, 18th August. It is specially noted in the schedule that in the classes for trays, standard-sized fruit trays (18 inches by 14¼ inches) must be used. A warning note is also sounded for exhibitors—that fruit not correctly named by exhibitors prior to the hour named for judging, will be disqualified. Wood-wool must not be used when staging exhibits in this section, except in the class for collection of Apples and Pears.

In the latter section, which is open to Associations or individual growers, fruit must be displayed on a square pyramid 4 feet high, with a base of 3½ feet. Any embellishments may be added to the pyramid, a skeleton of which will be supplied by the Society.

The entrance fee for collection of Apples and Pears is 10/-. Prizes, £12, £7, £4, £2. A special prize of £5 will be awarded to fruit in the best condition at conclusion of show.

The Governor-General's Shield, presented by Viscount Novar, will be competed for in this class. Previous winners were:—1923-1924-1925, Wantirna Cool Store; 1926, Diamond Creek Cool Store; 1927, Blackburn Cool Store.

Citrus Section.

The export packing competition should attract many competitors. It is open to members, or co-operative packing shed companies of any Australian Citrus Growers' Association affiliated with Central or Governing Citrus Associations. Cases and wrappers to bear Kangaroo brand.

This class will be judged on appearance of case, attractiveness and fullness, alignment and wrapping. Size, shape, colour, and quality of fruit. The first prize is £12, second £7, third £3. The winner will also be awarded the shield presented by Messrs. Isaacs & Sons, London.

The winner in this section last year was the Renmark Fruitgrowers' Co-operated Ltd. Renmark also scored in 1926.

Other sections in citrus are:—Collection of citrus fruits, Washington Navel, Late Valencia, Mediterranean Sweet, Queen, White Siletta, Joppa Oranges. Lemons, Grape Fruit, Mandarins.

Dried Fruits.

The dried fruits sections cover Sultanas, Lexias, Apricots, Peaches, Pears, and Prunes. There are also sections for Almonds and Walnuts.

SHEPPARTON SHOW.

October 23rd—24th.

The annual show of the Shepparton Agricultural Society will be held on October 23rd and 24th next. Full details are obtainable from the Secretary, Mr. John E. Byass, Fryers-street, Shepparton, Vic.

Victoria.

PLANTING GRAPE VINES.

Department's Warning.

The Assistant Minister of Agriculture for Victoria (Mr. Cain) draws the attention of those about to plant vines to the provisions of the Vegetation and Vine Diseases Act, concerning the removal of vines from Phylloxera districts into areas as yet clean. Those areas which were ruined by phylloxera some years ago were re-established at heavy expense. To guard against a similar fate in clean districts, the stringent precautions provided in the act should be carefully followed. Mr. J. M. Ward, Superintendent of Horticulture, declares that Phylloxera is still present, even in re-established vineyards, living in small numbers on the roots of resistant vines, to which it does no harm, or attacking so slowly that its presence may not be suspected. These vines are "carriers." An odd vine or so, planted carelessly in Swan Hill or Mildura, would lead to disastrous results.

In the State of Victoria, there are two areas known as "Vine Disease Districts." The Geelong district comprises part of the County of Grant, with an approximate radius of 15 miles from the town of Geelong. The North Central district comprises the whole of the Counties of Bendigo and Rodney: the greater part of the Counties of Noira and Gladstone and portions of the Counties of Bogong, Delatite, Anglesea, Dalhousie and Gunbower. The act states that any person removing vines or portions of vines from these districts or from any place outside Victoria so infested shall be liable to a penalty of not more than £100, or six months' imprisonment. Thus the introduction of vines has been prohibited unless by a permit from the Department of Agriculture, into the districts of Mildura, Swan Hill, Lilydale, Great Western, Tresco, and Koondrook.

The department issues a warning that these regulations are to be strictly enforced.

DEMPSEY GROWS GRAPES.

Jack Dempsey, the ex-world's champion pugilist, has bought a 40-acre vineyard in California. He will find it harder to make money out of this proposition than he did in the prize ring.

Interstate News and Notes

Queensland - N.S.W. - West Australia - South Australia

QUEENSLAND.

Orchard Notes for August.

CITRUS trees may now be reworked. Growth should be thinned out, allowing sufficient main limbs to form a well-balanced tree, and the approved type or variety can be grafted, or allowed to throw out new growth, which can be budded in due course. The latter method is recommended by many observant growers, and inferior and unprofitable trees can thus be converted into profitable trees in two or three years.

When **ploughing**, bury all weeds and work the soil into a fine tilth, so as to retain moisture in the spring. The Queensland "Agricultural Journal" points out that the spring is a very trying time, and the failure to conserve moisture then means more or less failure in the fruit crop.

Prepare land for planting with Pineapples or Bananas. Make land preparations very thorough, and the initial expense will more than be repaid.

As the **fruit fly** frequently appears in August, and citrus trees are likely to be attacked, growers should trap as many insects as possible, and destroy all infested fruit. By destroying the fruit flies early, this serious pest is kept in check.

For citrus trees infested with Wax Scale and White Louse, lime sulphur at one in twenty is advised.

In the Granite Belt in southern districts, the pruning of all deciduous trees should be finished at the earliest possible moment, giving a winter spraying of lime sulphur.

Top-working of Apple, Pear, Plum and other trees should be proceeded with. Should black Peach aphis show up on Almond, Peach, Nectarine, or Japanese Plum trees, spray with nicotine sulphate or Black Leaf 40. In the granite belt, experienced growers advise delaying the pruning of Grapes to as late in the season as possible, in order to keep back growth, and thus endeavour to escape late spring frosts.

SYDNEY NOTES.

(By Our Correspondent.)

A FEATURE of the month's marketing activities has been the commencement of a newspaper advertising campaign, the object of which is to popularise the eating of navel Oranges. The campaign is being financed jointly by the Griffith, Yenda and Yanco packing houses, and the work is being executed on their behalf by the Central Citrus Association.

The advertisements inserted to date have been of a high order, and that they are doing their work well is evidenced by the volume of sales. It is estimated that the street barrows alone are moving from 3,000 to 4,000 cases of large navels weekly, and this number should be improved upon considerably when Apples become less plentiful.

It is pleasing to see that several stalls are being allowed to operate at different points of vantage at the Central Railway Station. For this concession the Commissioners will deserve the appreciation of all who have the welfare of the fruit industry at heart.

From the outset these stalls have shown fine results, and they are now disposing of Oranges and Mandarins to the extent of over one hundred cases per day.

—Co-operative Marketing—

A big increase in applications for membership is reported by several of the packing houses, and there is no doubt whatever that a great swing over is taking place in favour of the co-operative method of marketing.

ORCHARD TAX IN N.S.W.

£4,500 Collected Annually.

There is an orchard tax operating in N.S.W., the provision for which has been included in the Plant Diseases Act.

The number of growers involved in N.S.W. is 16,000, the total sum collected being about £4,500 per annum. The number of growers seems rather high, but in this connection it must be realised the fee is collected on everything from a quarter of an acre upwards. The cost of collection is about £500. The fee is collected by the Department of Agriculture, and after deducting cost of collection, is deposited in a special account in the Treasury. The Minister for Agriculture is the sole authority, and pays out, as and when and to whom he deems desirable.

The fact that the Fruitgrowers' Federation of N.S.W. is largely responsible for the imposition of this 1/- per acre orchard tax has doubtless guided the Minister in deciding to pay the bulk of the money to that Association.

The N.S.W. Fruitgrowers' Federation receives about £3,000 from the sum. This represents the sole revenue of the Federation, and the Federation in its turn is bound under agreement with the Minister to accept the affiliation of any district organisation of fruitgrowers without the payment of any affiliation fee. There are something like nineteen district organisations affiliated with the Federation, representing something like 5,000 members out of a possible of not more than 8,000 commercial orchardists in the State.

ORCHARD TAX ADVOCATED.

A South Australian's Opinion.

That there should be compulsory registration of orchards is the considered opinion of Mr. J. Turner, fruitgrower, of Blackwood, South Australia. The funds so raised should be used for organising purposes. Mr. Turner, accompanied by his brother, visited Melbourne early in July, and called at the office of the "Fruit World." He states that the South Australian Fruitgrowers and Market Gardeners' Association is doing useful work, but they are hampered for lack of funds.

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

The fact that the Association has as members only two or three hundred growers is a decided disadvantage when they speak on behalf of the State in which there are probably three thousand growers.

By having a compulsory orchard registration fee, sufficient money would be raised to engage the services of a full-time secretary, when the various disabilities under which the fruit industry is at present suffering could be investigated.

It is not proposed that the money raised by means of an orchard tax should be used for trading purposes. There is much work for welfare and organising character, however, which is awaiting attention. The advertising of the fruit could be undertaken if sufficient money were raised, and for this reason the compulsory orchard registration fee is desirable.

Civil Servants' Orchards.

Mr. Turner quoted instances where the market has been depressed through fruit from men in Government employ being offered at a lower price than the market warranted. Some men in the civil service, it is stated, in receipt of salaries around £800 per annum, can afford to keep their orchards in the nature of a hobby, and sell the fruit at a price which would not pay the commercial grower. It is felt that whatever disciplinary action is proposed to deal with this matter, it would certainly be a necessity for a strong representative fruitgrowers' organisation to be in existence.

The Agricultural Bureau.

In response to a suggestion that the local growers should organise, it was pointed out that regular meetings of the Agricultural Bureau are held. But here again a difficulty is presented, for the time of these meetings is taken up with the discussion of cultural and other topics—very important and necessary—but at meetings of the Agricultural Bureau political and general welfare topics affecting the industry do not come up for discussion, and it is difficult to get the growers out to another district meeting to discuss these commercial matters.

Mr. Turner states that the need for a representative fruitgrowers' organisation is keenly felt by all thinking growers. Leadership would be welcomed that would ensure the passing of the Orchard Registration Act, or provide some other means of effective co-operative organisation.

WESTERN AUSTRALIA.

Cultural Work for August.

PRUNING AND PLANTING deciduous trees and vines should be completed by the end of this month, and wherever the soil is dry enough, spring ploughing should be in full swing (writes Mr. G. W. Wickens, Superintendent of Horticulture, in W.A. "Journal of Agriculture").

The second winter spraying for San Jose Scale should be completed before the 31st on all trees where the buds are forward. Late blooming kinds, like Rome Beauty and Five Crown Apples, may be left until the middle of September.

Where old Apple and Pear **trees require working over** to other varieties, the necessary scions should be secured early in this month from trees thoroughly dormant, and buried in soil in a cool place to retard bursting of buds.

Orange aphis will appear about the end of this month, and where the insects are sufficiently numerous to damage the young shoots, they should be sprayed with Black Leaf 40 and soap, using 1 lb. Black Leaf 40 and 3 lb. soap in 80 gallons water.

Where San Jose Scale and Woolly Aphis require treatment in the same orchard, use Black Leaf 40 and lime sulphur.

BRISBANE

F. B. BOLTON & Co.
ALBERT HOUSE,
BRISBANE.

Brokers and Selling Agents for
FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

We sell to wholesale Distributors only, and do not handle growers' consignments.
We act as Railway Freight Agents for growers' joint truck loadings, and secure lowest freight rates.
On Forward Sales of fresh fruit we act for sellers and collect cash in exchange for delivery order.

COVENT GARDEN,
LONDON
Ridley, Houlding
& CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.,
Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

Fruit Shipments
United Kingdom
and the Continent
W. D. PEACOCK
& CO.
24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

TASMANIA
Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.
Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.
Correspondence Invited.
H. JONES & CO. LTD.,
HOBART

Tasmania.

Advisory Board Meetings .·. Details of 2,804,468 Export.

At a meeting of the Tasmanian State Fruit Advisory Board, held on June 20, congratulations were extended to the Chairman, Mr. D. J. Pearsall, M.H.A., on being elected to the State Legislature, and also to Messrs. Neil Campbell, and J. P. Piggott, Ms.H.A., on their re-election. The Board endorsed the action of Mr. P. H. Thomas, at the recent Conference of the Ministers of Agriculture, at Perth. The new Minister for Agriculture, Sir Walter Lee, attended the Conference, and was congratulated. Sir Walter Lee, in responding, said he was sure the co-ordination that had existed between the Board and the Department of Agriculture, would continue.

Brisbane Shipments.—It was decided to draw the attention of the Tasmanian Government to the losses sustained by Apple and Pear growers through the lack of cold storage space on the fruit steamers trading to Brisbane, and to request that steps be taken to ensure that provision for cool store space on these boats be made available.

Cabled Prices from England.—Until a decision had been reached regarding the appointment of a growers' representative in England, it was decided to leave in abeyance the suggestion that the Agent-General send cables detailing the condition of fruit on arrival, and the prices received.

Loading and Overtime Rates.—The Chamber of Commerce wrote directing attention to the cost of loading and stowing fruit at Hobart, and in particular how these were influenced by the overtime rates paid, in respect of vessels which loaded the bulk of their cargo during the weekend. It was decided to make enquiries to ascertain the cost of loading on to the steamers.

Advertising Fruit in Sydney.—A letter was received from the N.S.W. Department of Agriculture in regard to the scheme for advertising fruit on the Sydney market. It was decided that the letter be circulated for the information of members.

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

STATE FRUIT ADVISORY BOARD.

A MEETING of the Tasmanian State Fruit Advisory Board was held at Hobart on the 29th June, 1928.

There were present:—Messrs. B. J. Pearsall, M.H.A. (Chairman), J. H. Astell, T. J. Eddington, A. Davies, W. H. Calvert, M.L.C., O. J. Morrisby, F. Peacock, J. P. Piggott, M.H.A., P. H. Thomas (Secretary).

Status of Board.

Consideration was given to the position of the Board in relation to the Government and fruit industries in view of the present Bureau organisation. After considerable discussion, it was decided, on the motion of Messrs. Piggott and Calvert:—

"That this Board intimate to the Government that all matters in which they require advice in connection with the fruitgrowing industries be obtained from the Board, and where the Commonwealth Government has to deal with the State Government in matters affecting the industry, any suggestions should come through the Fruit Advisory Board."

A deputation was subsequently arranged to the Minister for Agriculture, when members presented the resolution, instancing the unnecessary overlapping and duplication which might arise if the Board's status were not determined.

The Minister, in reply, pointed out that the matter was really for the determination of the Board in deciding the capacity in which they acted, either independently or in co-operation with the Bureau. He stated that whatever arrangement was made in this respect he would still look to the Board as the advisory body to the Government in connection with the fruit industry.

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

"YARRA"
BRAND
SPRAYS
PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street / 155 Yarra Street } Abbotsford, Vic.
Tasmanian Agents—
M. L. HOPKINS, HOBART

Upon resuming, consideration was given to the correspondence which had recently passed between the Secretary of the Agricultural Bureau and the Board in respect to acting as the advisory body to the Bureau.

Mr. Davies moved, and Mr. Morrisby seconded:—

"That this Board desires to make it clear that whilst our best advice will always be available to the Agricultural Bureau or the State Executive in any matters respect-

ing the fruit industries, which the Bureau may submit to us, we must retain our established status both as regards our relationship to the fruitgrowers and also to the Tasmanian Government." Carried.

Annual Fruitgrowers' Conferences.

It was decided that Annual Conferences take place as follows:—

Hobart: Tuesday, August 7th.

Launceston: Thursday, August 9th.

South American Markets.

It was decided to allocate the sum of £100 for advertising Tasmanian Apples in South America.

A sub-committee, comprising Messrs. F. Peacock, J. P. Piggott, and the Secretary, was appointed to arrange for the carrying out of the advertising propaganda.

TASMANIA.

Overseas Fruit Exports.

SIGNALISING the close of the most phenomenal fruit season Tasmania has ever known, the R.M.S. Mooltan, of the P. & O. Line, sailed from Hobart with approximately 45,000 cases of Apples for London. The quantity of fruit sent overseas this season from Hobart was 2,441,404 bushels, compared with the previous record total of 1,742,669 bushels sent in 1926. The shipments overseas from Beauty Point were also a record—363,064 bushels, compared with the 1926 record of 334,467 bushels. The total quantity of fruit sent overseas from the State this year has been 2,804,468 bushels, or more than three-quarters of a million more than the previous largest aggregate.

The Apple crop this year was so extremely heavy that considerable difficulty was anticipated in disposing of the fruit to advantage, but, owing to the efforts of local shippers in securing additional overseas tonnage to call at Hobart for fruit cargoes, the bulk of the abnormal harvest has been absorbed. Altogether, 50 vessels called at Tasmanian ports during the season to load fruit for overseas markets, three of them making two visits in the one season.

After a period of fourteen years, Tasmanian Apples will again appear on the South American markets, a shipment of 12,000 cases being forwarded by the s.s. "Port Denison" to Monte Video and Buenos Aires. It is hoped that this will be the forerunner of further shipments, and especial attention is being given to the possibility of developing these markets to Tasmanian exporters.

Overseas Exports from Hobart.

The following table gives the quantities of Apples and Pears exported to various markets during the 1928 season (to nearest bushel):—

	Date sailed.	Bushels Apples.	Bushels Pears.	Destination.
Berrima	Feb. 21	24,988	—	London.
Ferndale	Feb. 25	48,548	—	London.
Cathay	Feb. 25	34,742	533½	London.
Runic	Feb. 28	37,008	2,407	London & Liverpool.
Otranto	Mar. 3	28,031	—	London.
Barrabool	Mar. 5	57,522	1,076	London.
*Port Huon	Mar. 7	37,220	714	Hull & Hamburg.
Mooltan	Mar. 11	48,293	2,222	London.
Largs Bay	Mar. 14	41,056	—	London.
Medic	Mar. 17	40,887	4,444	Liverpool & Southampton.
Ormonde	Mar. 20	17,020	—	London.
*Port Hobart	Mar. 24	77,836	1,116	London & Hamburg.
Nestor	Mar. 24	31,003	—	London.
Ceramic	Mar. 24	62,351	6,002	Liverpool.
Comorin	Mar. 24	55,767	1,496	London.
Moreton Bay	Mar. 24	38,746	—	London.
Borda	Mar. 28	35,470	—	London.
Kochst	Mar. 28	33,758	—	Hamburg.
Oronsay	Mar. 31	28,040	—	London.
Maloja	Apl. 7	64,587	2,090	London.
Hobson's B.	Apl. 7	44,283	—	London.
*Edda	Apl. 8	90,150	3,076	London, Hamburg, Bremen.
Baradine	Apl. 10	67,421	1,031	London.
Osterley	Apl. 14	9,006	—	London.
*Trojanstar	Apl. 15	158,486	2,065	London.
Ulysses	Apl. 17	31,016	—	Liverpool.
*P. Gisborne	Apl. 20	92,511	462	Dunkirk, Amsterdam.
Moldavia	Apl. 21	26,872	1,178	London.
Euripides	Apl. 24	41,947	1,278	London & Southampton.
Telamon	Apl. 28	41,807	—	Hull.
Esperance B.	Apl. 29	50,960	—	London.
*P. Fremantle	May 1	91,998	551	London, Hamburg, & Southampton.
Orama	May 5	29,380	—	London.
Naldera	May 5	42,681	—	London.
Benalla	May 6	34,572	—	London.
*Port Darwin	May 9	90,635	—	London & Liverpool.
Vedic	May 13	32,462	1,739	Liverpool.
Beltana	May 13	53,758	—	London.
Chitral	May 19	74,843	133	London.
Fordsdale	May 19	69,291	15	London & Hull.
Jervis Bay	Jun. 2	95,300	—	London & Hull.
Narkunda	Jun. 2	56,252	33	London.
Balranald	Jun. 12	41,112	—	London.
Port Sydney	Jun. 16	21,353	—	London.
Cathay	Jun. 16	84,770	—	London.
P. Denison	Jun. 22	12,450	—	Monte Video, Buenos Aires.
Ferndale	Jun. 23	34,635	—	London.
Mooltan	Jun. 30	44,920	—	London.
Total		2,407,744	33,660	

*Also called at Beauty Point.

From Beauty Point.

Port Huon	Mar. 2	36,164	—	London & Hamburg.
Berwickshire	Mar. 9	34,321	—	London.
Asphalion	Mar. 18	29,380	—	Hamburg.
Port Hobart	Mar. 24	45,702	—	London & Hamburg.
Edda	Apl. 3	42,434	—	London & Hamburg.
P. Gisborne	Apl. 14	41,279	—	London & Hamburg.
Trojanstar	Apl. 19	42,642	—	Liverpool, Manchester.
P. Fremantle	Apl. 22	49,288	—	London & Hull.
Port Darwin	Apl. 22	42,854	—	London & Liverpool.
Total		363,064		These figures include Apples & Pears.

Grand Total 2,804,468 bushels Apples & Pears.

COOL STORES AT PORT HUON.

To cater fully for the orchards in the Huon district, which includes the highly productive areas of Castle Forbes Bay, Franklin and Geeveston, it is proposed to erect a new cool store, with a capacity of 50,000 to 100,000 cases at Port Huon.

The cost of erection will, it is estimated, be between £12,000 and £15,000. The project is being sponsored by the Tasmanian Orchardists and Producers' Co-operative Association, and a conference of fruitgrowers, exporters, and Department of Agriculture officers was held at Castle Forbes Bay, early in July, in support of the scheme, at which it was decided to directly approach the Development and Migration Commission for assistance in the venture.

The cool store, if erected, besides being of material benefit to growers for holding fruit for the late interstate markets, will also be an inducement toward obtaining the direct shipments from Port Huon to overseas markets, and every endeavor is being made to ensure that a proportion of the vessels loading next season will visit this port, and lift cargoes.

Visit of Sir John Russell.

Whilst visiting Tasmania during his world tour, opportunity was given to Sir John Russell, Director of the Rothamstead Experiment Farm, England, to travel through the principal Huon fruit districts.

Accompanied by the Senior Horticulturist, Mr. P. H. Thomas, and Agricultural Chemist, Mr. F. H. Johnstone, Sir John was able to inspect the different soils upon which fruit is generally grown, and also visit a number of orchards in the various centres.

At the Hobart Farmers and Fruitgrowers' Convention, which was held during his stay in the south, a very interesting lecture on "Soils and Plants" was delivered by the distinguished visitor to a large and appreciative audience.

Apple Evaporator Destroyed by Fire.

A disastrous fire occurred at Grove toward the end of July, when Mr. F. J. Parsons' evaporating and fruit pulping factory was totally destroyed by fire.

This, following the loss of Mr. R. Harvey's plant at Port Cygnet earlier in the season, will considerably restrict the production of dried Apples, and prove a heavy blow to the district, being the only factory of its kind in the locality.

The plant was one of the most complete in the Huon, tin-making, Apple evaporating, canning, and pulping of berry fruits all being carried out. About 30 men are thrown out of employment, the loss being estimated at £15,000, only half of which is covered by insurance.

Fruit Cases.

A conference between the Trades Hall (Timber Industry officials) and Sawmillers and Timber merchants and Fruitgrowers' Associations, was held at Launceston early in July to consider the position in respect to the increased import of pine cases from abroad and the consequent loss to the Tasmanian timber industry.

Established 1896.

Cooksley & Co.

Fruit Agents.

Fruit Exchange, Brisbane

Consign to the Agents with years of experience, who guarantee Fruitgrowers the best of Attention and Satisfaction.
Selected Tasmanian and Victorian Representatives.
Reference: Commercial Banking Coy., of Sydney, Bank of Victoria.
Shipping and Railing, No. 29.

GENUINE

"Black Leaf 40"

IN

10lb. & 2lb. tins

DISTRIBUTORS

The PRODUCERS' DISTRIBUTING Society Limited.

SYDNEY and MELBOURNE

An interesting and animated discussion took place in respect to the merits of the hardwood and pine case, and ways and means were considered for improving the local product.

It was determined that the crux of the situation lay in the adequate seasoning of the Tasmanian timber, and the erection of a proper case-making plant, which would enable the ends to be planed to a smooth surface. Financial assistance to sawmillers to allow of seasoning was urged, but the most important decision was a motion requesting the repeal of the section of the Forestry Act, which exempted sawmillers engaged in case-making from the timber toll, and incidentally from the grading and supervision exercised by the directors of the Tasmanian Timber Organisation Pty. Ltd.

FIRST SINCE 1915.

Tasmanian Apples for South America.

The steamer "Port Denison," which left Hobart at the end of June with a cargo of 12,450 cases of Apples for Buenos Aires and Monte Video, is the first steamer to take a cargo of Tasmanian fruit to South America since 1915. The Apples shipped were mainly Democrats of large size and excellent quality. Mr. E. Ross, of Messrs. H. Jones & Co., states that if this shipment proves successful, at least one steamer will load for the South American trade, every season, and thus revive trade relations that have been suspended since the early days of the great war.

Export of Grapes.

Victorian Trial Shipment Unsuccessful.

The experimental shipment of Ohanez Grapes from Shepparton and Merbein, Victoria, to London, sent by the Hobson's Bay in April, was unsuccessful. All cases showed some mould and bad berries.

The Merbein consignment consisted of 16 cases of Grapes, packed in a three-quarter bushel export Grape case, 25 lb. nett, with granulated cork filler, and 32 cases packed in South African style, 10 lb. nett of Grapes wrapped in paper and packed with wood wool. The Victorian Trade Commissioner in London reports that the 10 lb. case averaged 5/6 each, and the 25 lb. case 7/4½ each. Had they been in sound condition, they would have averaged 10/- and 20/- each respectively. The Grapes with cork fillers were better than those packed with wood-wool and paper. There was practically no difference between the conditions of the Grapes from Shepparton and those from Merbein, all showing a certain amount of bad berries and mould.

The control cases, cold stored in Melbourne, were still in excellent condition.

It is therefore evident that the trouble is on shipboard, and that the factors might include rough handling prior to stowage, temperatures, ventilation, etc.

That Ohanez Grapes can be safely exported to England has been demonstrated for many years past in the steady consignments of this variety of Grape from Western Australia.

New South Wales.

Orchard Notes for August.

COMPLETE ploughing without delay.

There is still time for the planting of deciduous trees.

Citrus trees may be planted where there is no danger from frosts, but in those localities where there is a likelihood of late frosts, planting should be delayed.

Now is the time for grafting, to work over unprofitable varieties. Select scions from such trees that have proved their fruitfulness. Top grafting is generally more successful with Apples and Pears than with stone fruits.

The whip-graft finds most favour with growers of small stocks. Cleft-grafting is used at times for working over old fruit trees, particularly Pears, Apples, Plums, and so on. Strap-grafting, which is another method of bark-grafting, may be used for working over medium to large sized old trees, and for this method splitting the limbs is not required, but the scion is thrust down between the bark and the wood, and a strip of bark, supported by a thin strip of sap wood, is carried across the top of the wood to be grafted, and inserted under the bark on the further side.

Grafting Wax.

Use 4 lb. resin, 2 lb. beeswax, and 1 lb. mutton tallow. Dissolve over slow fire, and apply with a small brush while warm. Another formula is:—Resin 5 lb. by weight, beeswax 1 lb. by weight, boiled linseed oil 1¼ lb. by weight.

Insect Pests.

For trees that have not commenced to shoot, spray for San Jose scale with miscible oil. Spray aphis-infested Cherry and Peach trees with spraying oil, as late as possible before the buds burst in the spring. An application of nicotine extract after the trees have commenced to shoot may be necessary.

Fungous Diseases.

Powdery mildew appears to be on the increase, especially on such varieties as Jonathan, Rome Beauty, and Sturmer. Remove all infected twigs, and later spray with colloidal (atomtised or atomic) sulphur.

Manuring Citrus Trees.

Fertilisers having a high nitrogen content are necessary. If using what is termed "complete" fertilisers, add sulphate of ammonia or nitrate of soda in quantities varying from 3 lb. to 10 lb. per tree, for trees in bearing and from five to twenty years old.

Be Your Own Experimenter.

Every grower is advised to experiment on a few rows of trees with nitrogen, phosphoric acid, or potash only. In treating the remaining trees a good mixture may be used, which can be made of the following:—6 cwt. sulphate ammonia, 3 cwt. superphosphate, 1½ cwt. sulphate of potash. Mix all together well, and apply 1 lb. of the mixture per tree for each year of the tree's age. Thus a seven-year-old tree will receive 7 lb. Apply about half of this amount by the time the buds burst, a further quarter of the amount about the end of October, and the remaining quarter by January. In districts where rainfall is not likely to be excessive, and danger of leaching is therefore small, a larger amount may be applied at the first application.

Any experiments conducted by the grower should be for a period of at least three years, by which time a reduction of phosphoric acid or potash may be found possible.—C. G. Savage and H. Proudfoot, in "N.S.W. Agricultural Gazette."

Messrs. Parsons & Jacques, manufacturers of spray materials, of Abbotsford, Victoria, have appointed Mr. M. L. Hopkins, of Hobart, their Tasmanian agent.

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England, the Continent and New Zealand.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

MANCHESTER

(40 Miles Inland)

Is the Nearest Deep-water Port to BIRMINGHAM, BRADFORD, COVENTRY, HALIFAX, HUDDERSFIELD, LEEDS, LEICESTER, NOTTINGHAM, SHEFFIELD, STOKE, and over 200 cities and towns in England's greatest industrial area.

The Bulk of Australian Fruit Is Landed in London

yet the population of the North and Midlands is greater by some millions than that of the South of England.

GROWERS AND EXPORTERS PAY THE BILL!

For Handling and Transport Charges and Deterioration of fruit despatched from London to the North for re-sale.

Official records of prices prove

There is no Better Market than

MANCHESTER

and the Port, Dock, Sale Room and Forwarding facilities are

SECOND TO NONE.

Ensure Minimum Charges and Maximum Results

By Direct Shipment to Manchester Docks.

Address enquiries as to opportunities for direct trade to:—

W. J. WADE, Representative of the Manchester Ship Canal Company

8 BRIDGE STREET, SYDNEY, N.S.W.

Cables and Telegrams:— **"Portoman," Sydney.**

"CANADIAN" STANDARD CASE REJECTED IN N.S.W.

A warning to fruitgrowers to observe the regulations on cases of the prescribed measurement was recently given by the Victorian Minister of Agriculture, who stated that a Victorian grower, who sent fruit to a N.S.W. agent in cases measuring 18 inches by 11½ inches by 10½ inches, had the lot prohibited from sale.

* * *

Negotiations are proceeding between the Departments of Agriculture regarding the use of this "Canadian" standard case for interstate trade.

This case is becoming increasingly popular in Victoria. It is desired to drop the prefix "Canadian" and that the case be known as the "Standard Case."

CITRUS TREE SHORTAGE.

Commenting on the foregoing, Mr. Geo. McKee, Citrus tree nurseryman, of Ermington, N.S.W., writes as follows:—

This season's shortage of Citrus trees, is due to the following reasons:—

(1) That very large quantities of Citrus have been sent to South America; and

(2) That owing to Citrus nurseries in this State having to burn very large quantities in the past seasons, they curtailed their stocks for this year.

I have no doubt that in a year or so large quantities will again be made into bonfires.

The Ronaldson-Tippett spraying machine has won the approval of users. The points of mechanical excellence are appreciated by fruitgrowers. The manufacturers, Messrs. Ronaldson Bros. & Tippett Pty. Ltd., 156 Creswick-road, Ballarat, Vic., state that they can give immediate delivery of both two and four wheel type, also 150 or 88 gallon plant. Full details and illustrated booklet are obtainable from the firm's head office at Ballarat.

FOR MARKETING EGGS.

A patent hold-fast filler, which fits kerosene case, is offered by J. E. Handbury & Son Pty. Ltd., 33 King-street, Melbourne, C.1. This is the Lima patent egg case, and practical experience has shown that it reduces losses in transport to a minimum. Sizes, 36 dozen and 18 dozen. The firm mentioned would be glad to supply details to all interested.

CANNED FRUITS DEPARTMENT

The Ardmona Cannery Half-yearly Meeting.

There was a large attendance at the half-yearly meeting of the Ardmona Fruit Products Co-operative Co. Ltd., on June 28, at Ardmona. Mr. V. R. McNab, Chairman of Directors, presided.

In his report, Mr. McNab stated as follows:—

Cool Store.

The company has completed the erection of cool stores capable of holding 58,000 cases of fruit, and has made substantial improvements to the dehydrator equipment; a new jam room was also erected in time to deal with the Apricot crop. The cool store, which is built of concrete walls and floor and cork lined, has given complete satisfaction, and is considered to be the most up-to-date installation in Australia for cooling fruit, and reflects great credit on the architects and builders.

Last Season's Tonnage.

The fruit treated for the growers during the past season amounted to 7,380 tons, of which 5,768 tons were preserved by canning, and 1,552 tons were converted into dried fruit or jam. During the previous season only 4,560 tons of fruit were treated.

Canned Fruit Exports.

The assistance given by the Federal Government to the industry in the form of a bounty for export enabled this company to ship 125.000 cases to the United Kingdom. To date every case has been sold before arrival, and many favorable reports have been received as regards quality. The influence of the recent Scottish delegation was shown by the influx of orders from Scotland.

As Australia is now producing canning fruits greatly in excess of its immediate requirements, the policy of the Federal Government in fostering the export trade with Great Britain is sound, and we hope that every effort will be made by our statesmen to obtain

by treaty, preference

for our products on the British markets, so as to enable us to compete with California.

Sales of canned fruits in Australia have been slow during the winter months, and have been affected by the glut of fresh fruits in all markets this year. We believe that the low prices at which canned fruits are now sold will increase the consumption in Australia during the next six months.

Planting Cessation Desirable.

A review of the census figures taken by the Department of Agriculture of Victoria, shows that 92 per cent. of the canning Cling Peaches in Victoria is grown in the Goulburn Valley, and the directors of the company endorse the recommendation recently made at the combined conference and canneries in Shepparton—**"That a complete cessation of planting be made for the next two years."**

Some Interesting Figures.

The following remarks, giving a general summary of the position relating to canning varieties of fruits as disclosed by the last census taken by the Victorian Government are well worthy of attention, and this report has been circulated to enable every grower to acquaint himself with the true position.

Apricots.—The chief canning varieties are Alsace, Blenheim, Campbellfield, Hemskirke, Mansfield, Moorpark, Royal, Tilton, and Trevatt. In Victoria 380,143 trees of these varieties are planted, of which Rodney and Moira Counties possess 56 per cent., or 215,948 trees. The best varieties for canning are Tilton, Trevatt, and Blenheim; but, unfortunately, Rodney has only 23,505 trees and Moira has 19,419 trees planted of these varieties, representing only 20 per cent. of their total Apricot trees. Further plantings of Tilton, Trevatt, or Blenheim to replace other varieties would improve the position, but some new variety that would ripen later than Moorpark is wanted and should be sought out. A light crop of one bushel per tree would yield 4,318 tons from Rodney and Moira, whilst an average of 1½ bushels to the tree would give 6,477 tons. Out of a crop of 1½ bushels the canneries would receive more fruit than they could eco-

HAMBURG
(GERMANY).
Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

F. W. Vear
Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
MELBOURNE, VIC.
Highest Market Rates Assured
Prompt Settlements

MARGETSON
& CO. LTD.
Fruit Importers & Salesmen
30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool
Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL
Head Office—Covent Garden Market, London, W.C.
Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.
Shipping Nos.
431 and 432

nomically handle, and provision must be made for drying, pulping or making into jam a large portion of this crop.

Williams Pears. — The census figures show that Victoria had 461,831 trees of this variety planted in 1926, of which 85,222 trees were non-bearing. Moira and Rodney combined have 53 per cent. of the total, or 247,058 trees. It is fair to assume that half of the trees recorded as non-bearing will have reached the bearing age by next fruit season (1929), and then Moira and Rodney between them will have approximately 290,000 trees in bearing. An average crop of two bushels per tree will produce 8,544 tons of Pears, with a definite prospect of 600 tons increase each year for the next five years within Moira and Rodney. As both canneries and fresh fruit markets were over-supplied last season with this fruit, a complete cessation of planting for at least two years is strongly recommended.

Cling Peaches.—The best Clings for the canning factory are those varieties which give the greatest quantity of the most profitable grades. Viewed in this light, late Clings, such as Pullar, Theile, Healesville group would rank first. Mid-season varieties follow in order of merit: Phillips, Sims, Golden Queen, Goodmans, and Levis, whilst Tuscan and Nicholls are the least valuable, and, at present, not profitable. The enhanced value which some varieties obtained because they ripened earlier in the fruit season becomes nullified if the canned fruit market is over-supplied, and as the cost of production of fruit from the late varieties is less than mid-season Clings, growers will perforce concentrate on growing late Clings in order to reduce the cost of production. Another factor which depreciates the value of mid-season and early Clings is that Williams Pears ripen here at the same time, and the factories commence processing Pears as soon as available in preference to the early and mid-season Clings. An analysis of the Clings planted shows that of the 578, 470 trees of canning Clings grown in Victoria, Moira and Rodney combined possess 531,114 trees, or 92 per cent., Moira having 208,802 trees and Rodney 322,312 trees in 1926, and as further planting has taken place each year since then the production will naturally increase for some years.

Being now in excess of all requirements, it is most advisable to cease planting for at least two years, and at the same time reduce the area of several of the least profitable varieties.

The following table shows the crop prospect, based upon two bushels per tree, for the Goulburn Valley, in tons:—

Rodney.

Percentage.	Name.	Trees.	Crop prospect in tons.
49.4	Pullar	159,255	6,370
3.2	Thiele	10,285	411
7.1	Healesville, etc	22,883	915
7.7	Phillips	24,994	999
5.1	Sims	16,447	657
2.5	Golden Queen	8,163	326
7.5	Goodman's Choice	24,232	969
.2	Gold Dust	671	27
12.4	Nichols	41,059	1,642
.5	McDevitt	1,637	65
1.4	Levis	4,469	178
2.3	Tuscan	7,596	304
.2	Lemon Cling	621	24
		322,312	12,887

Memo.—From the Shire of Rodney comes fruit for the Kyabram and Ardmona Canneries. Moira supplies the Shepparton cannery alone.

Allowing two cases per tree for the crop prospect, this practically represents (at 100 trees to the acre, and 50 acres to the ton), the four tons per acre which is the crop average for the whole district over a period of years. Last year it was more than this.

VICTORIAN CANNED FRUIT PRAISED.

Kyabram Canned Fruit.—Further eulogies have been received from the London agents in respect to Kyabram canned fruit forwarded to London this year. The fruit is described as "of good color, well processed, in good syrup, nice bright fruit and of regular size—a very good delivery."

AUSTRALIAN CANNED FRUIT EXPORTS.

According to an advice received by the Australian Fruit Canners' Association, the following sales of Australian canned fruit were effected in Great Britain during the week ended 7th July:—

Apricots	50	cases
Peaches (halves)	725	„
Peaches (sliced)	100	„
Pears	700	„
Total	1,575	cases

The sales from the commencement of the season to the 7th July are as follows:—

Apricots	26,902	cases
Peaches	122,111	„
Pears	56,228	„
	205,241	cases

Moira.

Percentage.	Name.	Trees.	Crop prospect in tons.
45.0	Pullar	94,066	3,762
2.6	Thiele	5,440	217
2.1	Healesville, etc.	4,376	175
7.0	Phillips	14,650	586
4.1	Sims	8,528	341
1.4	Golden Queen	3,008	120
14.7	Goodman's Choice	30,184	1,207
.07	Gold Dust	149	5
10.4	Nichols	21,690	867
.3	McDevitt	741	29
2.1	Levis	4,536	181
9.5	Tuscan	19,809	792
.8	Lemon Cling	1,625	65
		208,802	8,347

U.S.A. CANNING PEACH PRICES.

£5 Per Ton for 1st Grade.

The California Peach Growers' Association notified its members on June 16th that the Board of Directors, in consultation with the Conference and Advisory Boards, set the price on canning Peaches for the season of 1928 as follows:—

Clings.

No. 1 Cling Peaches (2⅜ in. and up, 25 dol. per ton.

No. 2 Cling Peaches (2¼ in. to 2⅜ in.), 15 dol. per ton.

No prices have been set on Freestones at this time.

NEW APPLE
"LALLA"

We are offering scions of this splendid Apple, as many growers wish to re-work unprofitable trees with this variety.

Scions supplied with an average of 3 buds per scion.

4/6 per doz., 5/- per doz.
Post Free.

We can strongly recommend this variety, C.W.O.

FRANK WALKER
110 Brisbane Street,
LAUNCESTON, TASMANIA.

Don't Lose
A Season

Order
Fruit Trees
NOW

Time is getting short if trees are to be planted this year, therefore send along your requirements at once to

GOODMAN'S

For 39 years we have been supplying highest quality fruit trees to growers all over Australia—and our reputation for clean, healthy, prolific trees is an enviable one.

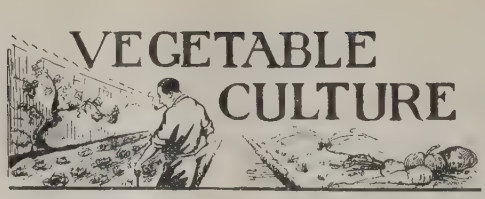
Illustrated
Price List
FREE

Write for this handy guide now. It shows how thoroughly Goodman's cater for your needs.

Quotes gladly supplied.

(W.McF.)

C. J. Goodman
Picnic Point Nurseries - Bairnsdale
VIC.



Make Large Sowings of Peas.

AUGUST IS A GOOD MONTH for the sowing of this most popular vegetable, which may be successfully grown in almost any soil or locality; but they will not thrive in land that is saturated with moisture.

The ground for Peas should not be very highly enriched with manure, as when such is the case there is a tendency in the plants to make an over luxuriant growth of haulm. Peas do well after a crop of Potatoes or Cabbages, for which the ground was manured.

Peas should always be grown in rows at such distance between as must depend upon the habit of the particular variety used. It should be a rule in all cases to allow sufficient space between the rows for a person to pass without difficulty, or causing injury to the crop. As a matter of course, tall-growing kinds must be placed farther apart than the dwarf varieties.

As soon as the plants are four or five inches high, the earth should be drawn up on either side about three inches, leaving a hollow space along the centre of the rows. Although seldom practised, it is an excellent plan to stop the plants when about six inches high, which causes them to assume a stronger and more bushy growth than otherwise. The operation is effected by simply pinching off the tops, which causes the plant to throw out branches from below, and occasionally it may be necessary to stop them a second time.

Good varieties to sow now are **William Hurst, English Wonder, Green Feast** and **Yorkshire Hero.**

Other Vegetables Worth Sowing This Month.

For use in November and December, make a sowing of **Early Allhead Cabbage.** It matures quickly, and is an excellent table variety. Also make a sowing of **Red Cabbage** seed, this being an exceptionally good month to sow.

A small sowing of **Early London Cauliflower** may be made.

Sow general crops of **Parsnip and Carrot.** The former in strong deep soil which has been well dug, and the latter in light ground of a good sandy nature.

Sow now the different kinds of **Beetroot.** The red for its root, and the silver for its leaves.

About the middle of the month, a sowing of **Celery** can be made in a specially-prepared bed of light rich soil. As Celery, however, has sometimes a tendency to run to seed when sown this month, it will be better to make only a small sowing.

The sowing of **Lettuce, Radish, Spring Onions, Mustard** and **Cress,** can now be commenced. Small sowings at intervals of two or three weeks will be found the best method to keep constant supplies available of these salads.

Tomatoes, Melons, Marrows, Cucumbers, and **Pumpkins,** can be sown, but only in specially prepared and well-manured beds in warm situations. It is advisable to place a wooden frame around them and cover at night.

Plant Potatoes.

Potatoes may be planted any time this month for a full early crop. Twenty inches distance between the rows will be enough for this early planting, and a foot or fifteen inches set from set. If plenty of manure is available, the best way is always to plant as you dig, and to put manure in each trench as you go on, placing the set on the manure in the trenches at the above-mentioned distances.

"MANCHESTER AS A SEAPORT."

The Story of a Great Achievement. Rapidly Developing Trade.

(Contributed.)

DURING the last few years there has been a gradual awakening to the importance of Manchester as a seaport. The importance of Manchester as a producing town has been known, of course, for generations, but this other Manchester is only beginning to have its just recognition. The very splendour of the thing which Manchester did, prevented a full realisation of the achievement. To make a port in the middle of England was so remarkable a thing that even now people scarcely realise it has been done; or, at best, they realise it in a purely formal way.

A visitor shown recently over the Manchester Docks saw there the great areas of water-space; the ships from the ends of the earth lying broadside to the quays; the cranes and the railway engines, the tall grain elevators, the warehouses, wharves and transit sheds, all pulsing with the life of a great community. "So this is it," he said. "I knew it at school, of course, as a black streak on the map, going from Liverpool to the middle of all those dots that were towns. Its different from what I thought. It's alive!"

It happens that that cluster of dots represents something enormously important to the man with the goods to sell. It represents the biggest industrial population in the world. The biggest market in the world, a market in which distribution is easy, once the goods have got to the heart of things, because all that population is living on a comparatively small space. At the very centre of it all is Manchester, and from any port in the world Manchester lies at the end of the first stage in the journey of the goods—the water stage. It used to lie at the end of the second stage. London, Liverpool, Hull or what not was the end of the water stage, and then the goods went on to Manchester by rail. That has all been unnecessary for a quarter of a century. Manchester is at the end of the first stage. Manchester is on the sea.

That, then, is the important thing which people more and more are discovering about Manchester. One way in which the discovery manifests itself is significant. It is by the holding of great Exhibitions in Manchester. Textiles, fruit, groceries—all these have been here recently, and will be here again—in fact, arrangements have already been made for holding the next

Imperial Fruit Show

in Manchester—making the third time in five years.

You have something to sell. There are some millions of people who must, perforce, buy. Men must wear clothes and they must eat food. This, then is the place to exhibit the goods; here where the customers are, and where the means are perfect for getting the goods to the customers in one jump.

If you are fishing for trade, fish **where there is a shoal**, not where you get an off customer or two into the net. That is the simple business philosophy of the thing.

There is a large and important body of people called the Manchester Wholesale Provision Trades' Association. Their President, at the last annual meeting, said they wanted direct shipment to Manchester of Danish bacon. The same thing, he said, applied to produce from the overseas Dominions, and he went on to say why. "It is only **logical** for us to want to have direct shipments, considering that the bulk of the produce is actually consumed in the area of which Manchester is centre."

"Only logical." That is the crux of the matter. There is only one logical way of bringing goods from abroad to Manchester, and that logical way is along the Manchester ship canal. What applies to bacon applies to meat, dairy produce, fruit, and every kind of imported commodity required in the surrounding area. The members of the Wholesale Provision Trades' Association know what they are talking about. They are the people on the spot who have practical experience of handling foodstuffs at the English end. And that is their considered judgment—**the ship canal is the only logical way!"**

July, 1928.

You Must "Pay In" First

You can't draw cheques on the Bank of Fertility unless there's something there to "meet them". Or put it this way: You can't take the elements of fertility from the soil unless you have taken care to see that they were there in the first place. Your crops are drawing freely on the soil's nitrogen supplies, and if that soil is to return profitable crops indefinitely, the nitrogen has to be replenished.

A variety of ways of doing so can be found, but the EASIEST and least EXPENSIVE—consequently the MOST PROFITABLE—is by the use of

Sulphate of Ammonia

Australia's best and most economical nitrogenous fertiliser—*now supplied in a dry, free-running, "neutral" state that prevents caking.*

Literature from
THE METROPOLITAN GAS COMPANY,
196 Flinders Street, Melbourne.
Telephone: Central 8162.

SA 6/28

SCIENCE AND THE FRUIT-GROWER.

Arsenate of Lead the Only Method for Destroying Codlin Moth.

The Production of Bickford's "Aero" Arsenate of Lead Described.

(Contributed.)

It is generally conceded that the codlin moth is the most destructive of the orchard pests.

Numerous methods of trapping and poisoning have been tried, including banding the trees with sacking or bird limed paper, but the greatest success has been found in spraying the trees at blossom time, and at later intervals, with material poisonous to the grubs.

Following experiments for at least twenty years past, orchardists all over the world have settled on arsenate of lead as by far the best form of poison to use.

Arsenic has many uses in insecticides, but for spraying fruit trees it must be prepared in a special way and rendered insoluble in water, else the tree itself will be killed. The arsenic compounds of lead have proved efficient in this respect, being harmless to the tree and its foliage, while at the same time being poisonous to the grub.

The manufacture of arsenical compounds of lead for the purpose of spraying fruit trees has now reached very large proportions throughout the world, and in Australia the firm of A. M. Bickford & Sons Limited, Adelaide, were one of the first to manufacture arsenate of lead, and have been making it ever since.

About ten years ago Bickfords "Aero" brand arsenate of lead was first marketed, the firm having at last satisfied themselves that their product was as good as skilful chemists and skilled operatives could produce.

A large demand sprang up, and this has gone on increasing until the original plant became quite inadequate to satisfy it, and a new installation of twelve times its capacity has had to be erected in the new factory at West Croydon, near Adelaide, S. Australia.

Here, is a plant which is unique in many of the methods employed, the whole installation (which was designed by Bickford's factory manager and chief chemist), providing for continuous working, and capable of turning out half a ton of powdered arsenate of lead every eight hours.

The raw material (which is obtained from the Port Pirie smelters), is first dissolved and converted into lead liquor. When the process of solution is complete and its strength brought to the standard laid down, it is, together with the appropriate quantity of similarly standardised arsenical liquor, run into a large wooden reaction vat; here the lead and arsenic in the solutions combine by chemical action and arsenate of lead is formed.

In order that the chemical action shall be thorough, and that the resulting precipitate shall be in an extremely fine state of division, it is necessary to have the solutions of certain predetermined strengths and further they must be mixed in a special manner, also the liquor in the reaction vat must be kept in a state of violent agitation during the whole time the reaction is proceeding.

This motion is produced by means at once novel and effectual, a screw propellor being used, which, revolving inside a cylindrical casing in the middle of the vat, forces the liquor out at the bottom, which returns over the top of the cylinder in a miniature Niagara of finely divided particles.

Tests are taken at intervals to ascertain when the process is complete, and when these are satisfactory the contents of the vat are discharged into the "Slurry" vat at a lower level.

The liquor now contains the newly formed arsenate of lead in the form of slurry, which is of the consistence and appearance of thick cream, and this is separated from the water in which it is suspended, by filtration.

This process is carried out in a filter press, through which the liquid is pumped, and in which the precipitate is caught on canvas filter cloths; the filtrate being allowed to run away to a drain.

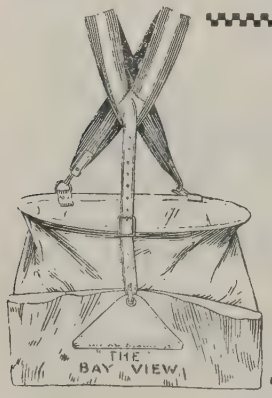
As the powder collects on the cloths the pressure has to be increased up to about 50 pounds to the square inch, and when this limit is reached clean water is pumped through in order to wash out any trace of soluble matter of any kind. The filter is then opened, and the contents of each section, now solid cakes of arsenate of lead, containing about half their weight of water, are placed on drying racks, which are piled one on another in the drying lofts, where by natural evaporation the remainder of the water is dried out. This slow natural drying is much better than forced methods employing heat, which tend to bake the cakes and enlarge the particles.

Drying is allowed to continue until the material is dry enough to be ground, which process necessitates that no more than one per cent. of moisture should remain.

Grinding is effected in a percussion mill, within which the dried cakes of the arsenate are pulverised by rapidly revolving beaters, until the powder is so fine that it will float on a current of air and rise through the air duct to deposit itself in the storage bin on the next floor; it is this flotation process which gives origin to the brand name "Aero," and it is in consequence of this method being adopted that "Aero" arsenate of lead is so surpassingly fine, so easy to mix, so economical to use, and so effective in application.

"Aero" arsenate of lead is also marketed in paste form, but the makers are strong in their recommendation of the powdered product in preference.

It should be said that in the making of lead arsenate, at least three dif-



"BayView" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

AGENTS WANTED

To Influence Consignments of Apples by Reliable Firm

Write, Stating Terms, Etc., to—

HARTSTOKE, FRUITERERS LTD.,
Brentford Market, Middlesex.

Code: A.B.C., Fifth Edition.
Cables: "Hartstoke, Brentford, Middlesex."

ferent compounds can be formed which each contain arsenic in varying proportions. Much of the merit in arsenate of lead lies in a high proportion of arsenic, so that all methods are devised to ensure that "Aero" brand arsenate of lead shall contain the utmost proportion possible, and every stage of its production has this in view, with a result that a percentage of 31.5 is guaranteed, and over 32.0 is almost continually reached; almost the highest that is even theoretically possible.

In order that no damage shall be done to the foliage of the trees, there must also be no more than traces of soluble arsenic compounds present, and in this respect the perfection of method employed results in its being possible to guarantee that these shall never exceed 0.25 per cent., and the proportion is actually, as a rule, less even than that small amount. In this it is claimed that "Aero" arsenate sets up a new world's standard.

As is necessary in the manufacture of all fine chemicals, daily tests are conducted both at the factory and also in the firm's city laboratories; in fact, every batch is tested, and until the tests are satisfactory the manufacture is not continued, but the manufacturing methods have been so perfected that seldom is there any need for delay.

Agents have been appointed in all States of the Commonwealth for "Aero" arsenate of lead; their names and addresses will be found on the illustrated inset which appears in this issue.

J. H. YOUNG & CO. PTY. LTD., MELBOURNE.

The attention of growers is drawn to the advertisement of J. H. Young & Co. Pty. Ltd., appearing on the Western Market page, in this issue. Mr. R. Gordon, Managing Director, has been in business as growers' agent for the past 22 years, and personally supervises all sales.

J. H. Young & Co. have for many years specialised in Pineapples, and Mr. Gordon recently returned from a visit to Queensland and the Citrus districts of N.S.W., where he entered into large business on behalf of his firm.

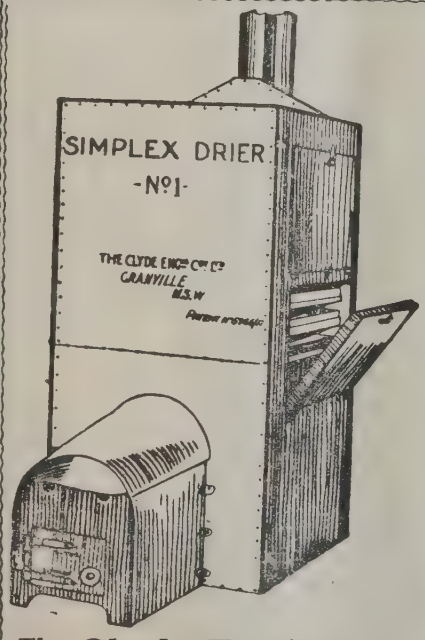
Growers can, with confidence, do business with this firm, which has established a name for reliable business during many years of operations in the markets of Melbourne.

NEW APPLE CASE.

A new self-ventilating Apple case has been invented by Mr. Robert Hall, F.L.S., Orchard Close, Hobart, Tasmania. This case is stated to be specially adapted to cold storage by all systems and open storage in sheds, as it supplies the following advantages:—

(1) Fuller four-sided ventilation when stacked on end, connecting as flues in two directions throughout the low temperature chamber and ordinary store; all bad gas gets away quickly.

(2) The loaders on steamships, if packing on side, will find that they have two strong footways of seven inches width each wherever they move, thus they have no need to tread where the thin palings are. The patentee points out that by doing away with the dunnage in ships' holds it is possible to secure a reduction in freight of £25,000 from 3,000,000 cases. Various other savings are expected. A company is being formed, termed Tasmanian Apples Limited, with a capital of £60,000. The provisional directors are Messrs. T. J. Kellaway, Vincent Shoobridge, and Robert Hall, and the registered office is at 97 Collins-street, Hobart.



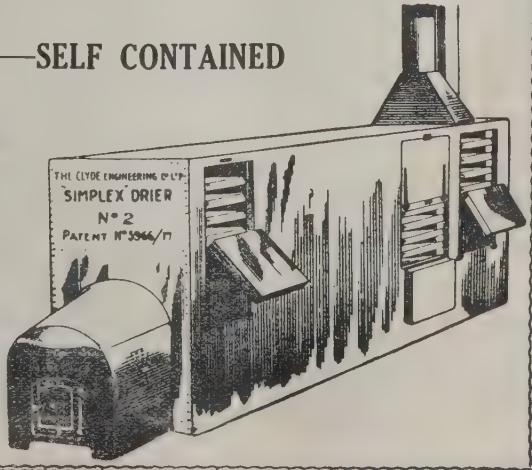
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ld.
GRANVILLE, N.S.W.

SIX IMPLEMENTS IN ONE

ONE WAY DISC - SPRING TYNE CULTIVATOR
TWO WAY DISC - LIGHT 3 FURROW PLOUGH
CUTTING RAKE - IRRIGATION FURROWER

Reversible to throw to or from the trees. Made in various sizes. Send for particulars

SIMPLE TO OPERATE

LEAVES THE LAND PERFECTLY LEVEL

We Manufacture a Full Range of Special Tractor Orchard Implements

Write for Catalogue, stating either Tractor or Horse Drawn Implements

D. HARVEY, ORCHARD IMPLEMENT MAKER
BOX HILL, MELBOURNE, AUST.

SHOW ROOMS 440 ELIZABETH STREET, MELBOURNE. AGENTS ALL STATES.

Nobelius'

Fruit Trees

Known All Over Australia

for their

Strong, Healthy Growth

We have a particularly fine stock

of

Apple Trees

including the following:—

DELICIOUS	ROME BEAUTY
JONATHAN	DEMOCRAT
KING DAVID	DUNN'S
STAYMAN	GRANNY SMITH
WINESAP	CLEOPATRA
GRAVENSTEIN	ROKEWOOD
YATES	FIVE CROWN

GLENGYLE, Etc.

Write for 1928 Catalogue of Fruit Trees, Ornamental, and other trees.

C. A. Nobelius & Sons Pty. Ltd.

Gembrook Nurseries,

Emerald, Victoria.

Telephone: Box Hill 154.

Gardening Brevities

Continue planting Roses, fruit trees and berry bushes.

Sow English grass for lawns about the middle of this month.

Sow seed of Rock and Water Melons in hot beds.

Plant Asparagus and Rhubarb crowns.

Plant Clematis, Honeysuckle, Virginia Creeper, and other climbers.

Plant Gladiolus corms for spring and summer flowering.

Plant artichoke tubers. You will thus have some very delightful Sunflower-like flowers, and useful Artichoke tubers for vegetables later.

Plant hardy shrubs for permanent garden decoration and beauty.

Finish the pruning of Roses and fruit trees without delay.

Several varieties of Wattle are now in glorious bloom. Remember that by planting selected varieties of Wattle in the home garden you can have a continuous supply of Wattle blossom throughout the year.

One of the most glorious winter-flowering shrubs is the Calycanthus praecox. Every garden should have at least one specimen: more would be an advantage. The perfume of this flower is exquisite.

Notice of Removal

The "Fruit World" office has been changed from Bank Place, Melbourne, to 78a Victoria-street, near corner Russell-street, Melbourne.

Garden pests abroad

Scale Insects, Powdery Mildew, Red Spider, Woolly Aphis, Peach Leaf Curler, Black Cherry Aphis, etc.

—Look to your fruit!

Paterson's Concentrated

"CLENSEL"

is the

Only Combined Insecticide and Fungicide

"Clensel" will destroy all garden pests, and can be sprayed at any time **(NO OTHER SOLUTIONS REQUIRED)**, even when trees are in bloom or in fruit, as it is absolutely **NON-POISONOUS** and **NON-INJURIOUS.**

"Clensel" is not a new product that you need feel sceptical about. It has been used extensively in Britain and India for years, and now prominent Orchardists here, who have thoroughly tested it, say that **"Clensel" is what they've been waiting for.**

Literature on Application.

CLENSEL PTY. LTD. 184-6 Queen Street, Melbourne C 1

Central 2654.

Eggs—Eggs—Eggs

Read these short but eloquent testimonials which were received on the one day

SHORT and to the point, these testimonials convey very definite proof of the value of feeding poultry with Karswood Poultry Spice (which contains dried and ground insects). The wording in each case is different, but the meaning of the whole 3 is the same—unanimous approval of Karswood. Here they are, just as we received them :—

"Never get below four eggs."

Dear Sirs,

The Karswood I am using is making my half-dozen fowls lay considerably. I have three Black Orpingtons and three Bantams, and I never get below four eggs.

(Signed) S. BALL.

5 Cook Road, Marrickville.

"A great boon."

Dear Sirs,

I have used Karswood Spice and find it a great boon for bringing backward fowls and pullets on to egg-laying in a very short time.

(Signed) E. BOURNE.

56 Carlton Terrace, New Town, Tas.

"Am very satisfied with it."

Dear Sir,

I find a marked improvement in the egg-yield by using Karswood Spice, and am very satisfied with it.

(Signed) A. M. BEAGLEY.

Ashton, S.A.

Make this Test.

Go to your local grocer, storekeeper, or produce dealer. Get a 1/– packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results ; Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Supplies.

Karswood Poultry Spice is obtainable at all wholesalers and stores at the following standard retail prices :—½lb. packet, Price 1/– ; 1lb. packet, Price 2/– ; 7lb. tin, Price 13/– ; 14lb. tin, Price 25/– ; 28lb. tin, Price 48/–.

12 FP.28

Poultry and Beekeeping

POULTRY.

Drinking Water.

THE MOST RAPID method of transmitting infectious diseases through a flock of birds, is by means of drinking water. It is therefore essential that a constant supply of fresh, clean water be available

Sick Birds.

Sick birds are a menace to the whole flock. They should be isolated immediately, and if they do not respond to treatment, then the best method is to destroy them. The dead fowl should be burned, not buried. It it is buried, your dog may scratch at the spot and dig it to the surface, and there is always the possibility of infection by worms or insects.

Fresh Ground.

Fresh ground is the answer to many diseases in both old and young birds. If the present house is too large to move, then have two yards, one on either side, fenced off, and used on alternate years.

The yard that is not being used should be planted with a crop that requires frequent cultivation. For the safest, surest way of handling poultry, the movable poultry house is recommended.

Green Feed.

No flock can possibly thrive without green feed, and this applies particularly to growing chickens. An abundance of green feed, not only keeps the birds healthy, but reduces the grain account.

It is common for fowls to go off grain feed, but they rarely refuse green feed. Variety should be studied, do not keep to the one class of green feed. Finely cut grass, lucerne, clover, and green oats are ideal, and cabbage, lettuce and silver beet will be relished.

Easy to Cull.

A Rhode Island Red cockerel, when mated with Light Sussex hens, gives sex-linkage color distinctions, meaning that the sexes of the chicks can be clearly seen by their different coloring. A similar result follows when a Brown Leghorn cockerel is mated with Light Sussex hens. The early separation of the sexes thus enables the breeder to sell his male chicks to the fattener and devote all his space to the pullets.

Soft-shelled Eggs.

Soft-shelled eggs are caused by hens becoming over-fat, diseased egg organs, or a lack of mineral food. Minerals play an important part in digesting food, as well as supplying bone material and shell substance. Look to your shell-making material.

A regular supply of grit and charcoal should always be available for the birds.

Cleaning the House.

ALL BUILDINGS or structures that house poultry should always be kept clean. Droppings should be removed daily in some instances, but twice a week in ordinary circumstances should be sufficient.

In any circumstances a general clean-up should be made every three months and the fowl house thoroughly disinfected. If you wish to make a success of poultry keeping, it is absolutely essential to have clean houses, clean feed, clean water, clean yards, and clean birds.

Rearing Day-old Chicks.

Many people who purchase day-old chicks and adopt the natural method of rearing them, make the mistake of giving the hen charge of the young birds only a day or two after her broody period has commenced. This invariably means that the hen does not take kindly to them, with the result that the chicks get chilled. Another drawback is that the hen will probably resume laying, and cease to properly mother the chicks.

When a broody hen is being used for mothering incubator chicks, it will be wise to allow her to sit on the nest for at least ten days before giving her the care of the young birds. As a general rule, the longer the hen is allowed to remain broody—about three weeks—the better she will care for the chicks. Where trouble is experienced in getting the hen to take charge of chicks not hatched by herself, is to place each chick well between the hen's underfeathers. Especially is this the case with chicks hatched by another hen. The operation should be carried out in the dark.

The Sitting Hen.

When hens are used for hatching purposes, the aim should be to make the conditions as natural as possible, and at the same time to have the hen under control.

It is always best to have a boarded floor to a coop, unless, of course, the coop is under cover. In the latter case, the nest should be made on the ground. When a coop in the open is used—whether with or without a floor—it should be raised inside with fine earth about three inches above ground-level. This will help to keep the hen and her brood high and dry when wet weather conditions prevail.

The nest should be formed in the earth in saucer shape, and made in such a way that the eggs will not roll out, nor roll on top of each other. The bottom should be more or less flat in order to allow the hen the necessary room to turn the eggs, which she does several times a day. Nothing but a little hay should come between the eggs and the earth. If there is some moisture in the earth, so much the better.

The common trouble of chicks failing to hatch when under a natural mother, is want of moisture, especially in hot weather. To overcome this trouble, some people spray the eggs

J. E. HANDBURY & SON PTY. LTD.
33-35 KING STREET, MELBOURNE
This is the firm to send your eggs to if you want Highest Values Returned
— Correspondence Invited —
Sole Agents for —
"Lima" Patent Egg Case
Reduces Loss to a Minimum. Every Poultry Farmer should use them
SIZES, 36 DOZEN AND 18 DOZEN. Also
PATENT HOLD-FAST FILLERS Made to Fit Kerosene Cases.

"To choose the Best is Wisdom"

ACCURATE and EFFICIENT

Mechanically Correct

Model 15C, Grades into 8 sizes.

All "LIGHTNING" Sizers are fitted with a patented rubber roller—ELIMINATING ALL CHANCE of bruising or damaging the fruit.

This model is designed specially to provide growers with a fruit sizer which will give them many of the advantages of our higher-priced models.

Model 15C can be supplied without packing bins or with bins on one side only.

Full description and prices on application.

The **"LIGHTNING" Fruit Grader Co.** is devoted entirely to the manufacture of facilities for the Fruit Industry and includes complete Processing Equipment, Sizers for the Individual Grower and Packing House, Gravity Conveyors, Lidding Presses, Clamp Trucks, Ethylene Gas, etc.

THE "LIGHTNING" FRUIT GRADER CO.

5 Hoddle Street, Collingwood, N.9, Melbourne

Cable and Telegraphic Address, "LIGHTNING," Melbourne VICTORIA

with warm water towards the end of the incubation period, but this does not always have the desired effect. A better plan, when it is considered that the air has dried down too far, is to lift the nesting material and moisten the earth. In this way, the heat of the bird's body will draw the moisture to the eggs, and soften the membrane under the shell, thereby assisting the chick to get out of the shell.

Do not let lice drive the sitting hen from her nest—a common occurrence when the eggs are on the point of hatching. Give the hen a good dusting with insect powder before being set, and again before the chicks hatch. On no account dust the hen when the chicks are very young. The powder may cause blindness in the chicks.

It is a mistake to interfere with the hen when the chicks are hatching, she can best manage by herself. It is also a mistake to give a hen with a young brood, free range. It is injurious to the chicks to wander in long grass that is at all likely to be wet.

A hen should never be set on valuable eggs at the first sign of broodiness. The best plan is to try her first on some dummy eggs. Many valuable sittings of eggs have been scratched about and broken through being placed under hens, which at the time did not posses the right sitting desire. After five or six days, the eggs should be examined by means of a tester. Any that are infertile or contain dead germs, should be removed.

PINUS INSIGNIS.
Forest-Grown, 18-24 inch, £1 per 100, on Rail, Melbourne.
F. G. STIRLING,
Ivanhoe, Victoria.
'Phone: Ivanhoe 234.

Bee Keeping.

Breeding.

COLONIES in normal condition will now have a good quantity of sealed brood in the combs, and young bees emerging every day. The queens will not be up to their full capacity, but their powers in this direction will increase with the approach of warmer days.

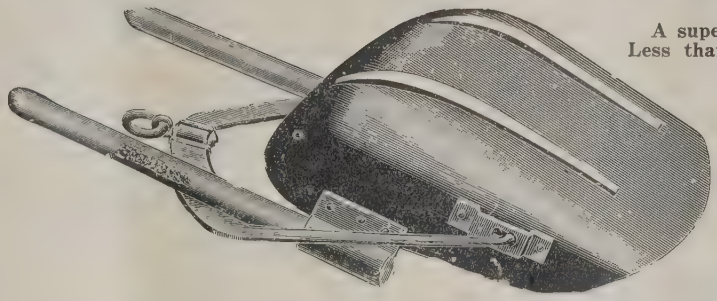
The first bees bred this season will soon be acting as field-bees, and the older autumn-bred ones will be rapidly dying off. Breeding should be kept going steadily without a break, as it is necessary that each colony should grow in strength in order to be in a condition to take advantage of the first flow from the early nectar-secreting plants.

Food and warmth are the main factors in promoting steady breeding, and these should have constant attention. It will be well to remember that when breeding is in full swing, a considerable amount of food is used up every day for feeding the brood. All through the spring, when weather conditions are favorable, some nectar can be gathered, and often a good deal is stored which helps to supplement the stores in the hive.

However, there are times when, through bad weather, the bees are unable to do this. When such conditions prevail for several days, the food supply will diminish rapidly, and the bees reduced to starvation before the beekeeper is aware of their condition. August and September are critical months in this respect, and if a spell of bad weather is experienced it is well to ascertain the condition of the food supply in each hive, and

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE." 499 LITTLE COLLINS ST. MELBOURNE.

"Macson" Scoops



A superior Scoop at
Less than Usual Prices.

For irrigation work, drains, channels, dams, roads, &c., these Earth Scoops are essential to quick work. The "Macson" Scoop enters ploughed or virgin soil readily, cuts it away quickly and cleanly, and is extremely light on the horse. The body is pressed COLD from a solid plate of hardened steel, thus avoiding the weak corners often found in hot-pressed plates. Fitted with steel runners and detachable handles. Built much stronger than necessary, and will last a lifetime.

PRICES:—3 cub. ft., 57/6; 5 cub. ft., 62/6; 7 cub. ft., 67/6; 10 cub. ft., 110/-.

McPherson's Proprietary Limited

582 COLLINS ST., MELBOURNE;
51-65 BATHURST ST., SYDNEY;
116-130 WEYMOUTH ST., ADELAIDE.

feed without delay where necessary.

Hints to Beginners.

Here are a few points every beginner should bear in mind when starting an apiary. Stocks must be clean and in good condition. No one can succeed with poor bees, do not start with anything but strong colonies.

No Draughts.

Hives should be well made and painted. Cracks and knot-holes may be of use for ventilation in the summer, but at any other time of the year they absorb much of the bees time in gathering material to stop the draughts.

Any holes, other than the entrance, offer inducements for robber bees to investigate, and the bees in the hive have to put on extra guards to prevent attack.

Watch Stores.

A careful guard should be kept on the stores, so that the bees may not starve. It is far better to overfeed than underfeed. More feeding means more brood. Once you start feeding, continue it until the hives show actual proof that they are gathering sufficient nectar to keep themselves going. Feed only in the evening, inside the hives, and use a syrup in the proportion of two parts water to one part sugar. See that the syrup is properly cooled before giving it to the bees.

Position of Hive.

Provide permanent shelter. A live hedge is best if kept trimmed to a height of eight to ten feet. Hives must never be exposed to high winds. If they are, then considerable damage will be done to both hive and bees.

Open the hives only on warm still days. Make your observations quickly and take a note of them. Mark the date of each examination. Endeavour to distinguish the sex of the brood at a glance, and keep a sharp look-out for the queen. She is easily distinguished by the length of her body, and the comparative shortness of her wings. Try to make a rough estimate of the weight of each frame as you lift it, comparing it in your mind with that of an empty comb, thereby arriving at some idea of the quantity of stores in each hive.

Do not try to run many hives until the rudiments of the business have been grasped. Be content with one or two colonies until the learners' stage has been passed.

"Willie, I wish you would run across the street and see how old Mrs. Tompkins is this morning."

A few minutes later Willie reported: "Mrs. Tompkins says it's none of your business how old she is."

PRODUCERS' DISTRIBUTING SOCIETY.

Successful Half-year.

The balance sheet of the Producers' Distributing Society Ltd. (which was previously known as the Coastal Farmers' Society) for the six months ended March 31, shows a satisfactory position. Sales total £2,634,265 being over £500,000 more than the previous half-year, and £120,000 over the corresponding six months of last year.

IS GRASSHOPPER PLAGUE COMING.

The possibility of a serious grasshopper plague is receiving careful consideration. The "Murrumbidgee Irrigator" states that, given a good hatching season, the millions of grasshopper eggs now lying about the adjacent dry areas will develop into a grasshopper plague of stupendous proportions, unless steps are taken to combat it. Watch, spray, and bait, is briefly the Department of Agriculture's advice to farmers and landholders who have suffered from the ravages of grasshoppers during recent months. The poison bait is made by using arsenite of soda or Paris green mixed with molasses or treacle.

Some Thoughts for Orchardists.

Top Working — Next Season's Crops — Organising the Industry.

(Contributed.)

The article on "Top-working of Fruit Trees" in the July issue was of great interest, especially as it is a decidedly discouraging process to dig out trees, with apparently very strong and healthy root systems, but which are doomed to death, because a fungus got into the wood after the tree had been cut back for top-grafting.

One or two points arise out of this article, however.

(1) Height of grafts above ground. No doubt the wounds, which are smaller, higher up, would heal much quicker, but if put on 13 ft. or 16 ft. up, that would apparently leave a considerable extent of non-bearing wood below, and the portion of the tree picked would be higher off the ground than is usual, I think, in Australian practice.

(2) "The grafts have never been cut back since they were set." Has this method—leaving the grafts unpruned, been tried in Australia?

Next Season's Apple Crops.

The answers to the enquiry as to the best method of assisting an Apple tree to bear a crop in the coming season, after having borne a heavy crop this season, are decidedly of "topical interest," as most of the growers in Victoria will probably have to face the same problem.

It seems probable that even where the setting was fairly heavy, if the trees were well manured, and the ground well cultivated, a fair number of fruit buds for the following season may have been formed.

Mr. Val. Kerr points out that there may be a shortage of bloom on cross-fertilising varieties, and suggests providing from other kinds for the purpose. Some growers have had considerable success, especially with Pears, through putting bloom in bottles hung in the trees, though where this method is used in Apple trees the results do not seem so certain.

A point which might help this season is that by

spraying with oil,

preferably about the middle of July, though I have obtained the same result even as late as August 9th, a late blooming variety may be brought into blossom, say, 10 days earlier than usual, and so nearly co-incident with an earlier blooming variety.

Organising the Industry.

The winding-up of the Victorian Fruit Council, and especially the failure to bring to a successful issue any alternative scheme for having a representative body of fruitgrowers, raises serious points, especially if viewed in connection with a season like the present one.

It may be granted that the Cool Stores' Association is doing excellent work, but it is a question whether it represents all the Apple and Pear growers, and in all their different varieties of interests and problems; or, apart from that, whether it would be taken as officially representing the whole body of growers, when approaching any public bodies, like the Government, the Railway Department, or the factories; and unless the growers have some such representative organisation, they must certainly start off with a decided handicap against them in approaching any such bodies.

Further, though the large crops of Apples have been one factor in tending towards the low prices at which Apples have been sold, **yet probably quite as important a factor has been the total absence of any scheme for handling the extra crop.**

Whether any scheme for fixing a minimum, reasonably moderate, price at which Apples should be sold (by which means the large supplies of inferior fruit would have been automatically withdrawn from circulation, as the buyers would naturally take the better fruit at the fixed price), could have been worked or not, the market could have undoubtedly been kept firmer if the growers had agreed together

not to "undercut"

each other in a way which could only be described as "suicidal"—Apples being offered in the market at 1/- and 1/6 per case.

It would have been an advantage to have had a scheme of marking out districts for direct distribution, so that overlapping could be minimised.

SULCAR
CARBONISED SULPHUR
Spraying Mixture.
THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED
DOES NOT BURN.
Manufactured by
SINCLARE & Co.
BOX 3, KING ST., P.O.-SYDNEY.
(Works,-Alexandria)

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of G. WOOLF & SONS.
Bankers.—National Bank of Australasia (Western Branch), Melbourne.
City Telephone: M 2012. Private Phone: M 3055.
City Address: Box 4003, G.P.O., Spencer St., Melb.

Does This Interest You!

WELL-KNOWN English firm of Fruit Brokers and Importers require **Sound, Reliable and Energetic Representatives**, either firms or individuals, to induce **Consignments of Apples, Pears, etc.**, on their behalf, from **New South Wales, Victoria, South Australia**, and **Western Australia.**

Terms by Arrangement.

References Required and Exchanged.

Apply in first instance to

S.B. c/o Lockwood Press
1 Mitre Court,
Fleet Street, London, E.C., England.

FIGHTING ORCHARD INSECT PESTS.

Woolly Aphis.

See the "Fruit World," June 1, 1928, p. 237.

Black Aphis of Orange and Lemon.

These small insects are now in vast numbers on Cherry trees. They cause very much damage to the trees, often killing them outright. Spray with nicotine sulphate or black-leaf 40.

Codlin Moth.

See the "Fruit World," July 1, 1928, p. 237.

Pear-leaf Blister Mite (Phytoptus).

After pruning, spray with red oil. Burn all leaves or prunings.

Scale Insects.

San Jose, Red, Brown, Apple Mussel and Olive Scales.

Spray after pruning with red oil. Burn all prunings. For summer treatment, use lime sulphur.

Orange Butterfly.

The yellow and black caterpillars of this butterfly are still in fair numbers on Citrus trees. They are very destructive to the young shoots. Spray with arsenate of lead.

Painted Apple Moth, Bryobia and Red Spider.

See the "Fruit World," July 1, 1928, p. 237.

PAINTING THE CAR.

A Hint for Amateurs.

The best paint to be used by an amateur painter is Ripolin, as with this paint quite a good finish may be obtained with little skill. First, the car should be well rubbed down with fine sandpaper and washed with water until the surface is perfectly smooth. The undercoating may then be applied and allowed to dry. This should be rubbed down with fine sand paper and washed, and the Ripolin then applied. If the final coat is applied with sufficient skill to prevent brush marks appearing in the paint, then the result will be quite satisfactory.

BENEFITS OF LIME.

Liming soils may bring about beneficial results in several ways. It stimulates the proper decomposition of organic matter, neutralises acids, improves the physical condition of heavy soils, supplies lime to growing plants, or makes available other elements in the soil. In any given case where there is need for lime, some combination of these results is probable, and in some cases all of the benefits might follow.

—Department of Agriculture, U.S.A.

Father: "I never kissed a girl until I met your mother. Will you be able to say the same to your son!"

Son: "Not with such a straight face as you can, father."

IMPERIAL FRUIT SHOW.

The Imperial Fruit Show will open at Manchester on October 19, and continue for a week. Among the sections will be special exhibits of cold stored fruit grown in the United Kingdom. The winning exhibit will be presented with a cup by Messrs. J. and E. Hall, refrigerating engineers, of London.

Are You Planting Fruit Trees this Season?

If so, do not forget that we have ample supplies to offer.

Trees grown at Kinglake and Yarra Glen

Larger, Stronger, Healthier than ever

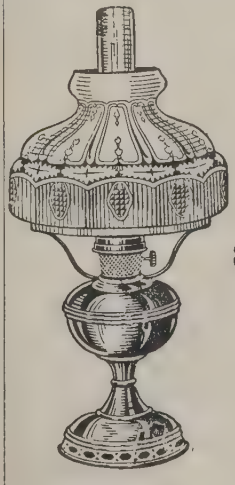
Apples.—Jonathan, Five Crown, Rome Beauty, Cleopatra, Granny Smith, Delicious, Democrat, Statesman, etc.

Also Pears, Plums, Peaches, Apricots, Quinces. Best varieties.

We must sell and are prepared to sacrifice the best trees for one season at prices far below the cost of production. Do not miss this chance—

Write now.

JAMES W. LAWREY, Kinglake Nurseries, Yarra Glen



ALADDIN LAMPS

Table and Hanging styles. Make the home bright. Softer and better light than Electric. Keeps your eyes strong. No injurious rays. Light equal to sunlight. One Pint of Kerosene will burn for eight hours. Save their cost.

5/- allowed on old lamps. Miller or any metal-bowl lamps converted to the ALADDIN.

THE EDGELL SPRAY PISTOL,

Fitted with the Improved Small Jet.

The most economical Sprayer ever invented. Saves ½ cwt. arsenate of lead in a week's spraying. One man can do the work of two with the Edgell. Every user testifies to the above facts.

Catalogue Free.

Phone 6645.

T. W. SANDS, The Melbourne Lamp House

372 Lonsdale Street, Melbourne

The Fruit Trade

Market Reports and News Items

FRUIT PRICES IN GREAT BRITAIN AND THE CONTINENT.

Chilian Apples in London.

July 2, 1928.

An interesting development in the fruit trade is the first arrival of Chilian Apples, the quality of which surprised and pleased Covent Garden experts. The Apples mostly exceed three inches in diameter, and comprise Newtown Pippins and White Winter Pearmains. They are all beautifully clean and showy fruit, especially the Hoovers, and they are well graded and attractively packed. Although too big for English requirements, they are realising 14/- to 15/- per case. One leading importer says that if Chili sends 2¼ or 2½ inch Apples, it is likely to become a serious competitor of Australia, as the seasons are concurrent.

London.

Ex the "Euripides."

The "Euripides'" **South Australian** Apples sold as follow:—Jons., 11/- to 12/-; Romes, 10/6 to 11/6; Cleos., 11/6 to 12/6; Rokewoods, 12/- to 13/-; Nickajacks, 12/-.

Ex the "Port Adelaide."

The "Port Adelaide's" **New Zealand** Jons. brought 9/- to 13/-; Cleos., 12/- to 14/-; Newtowns, 11/- to 13/-; Spitzbergens, 10/- to 12/-. **New Zealand** Winter Nelis Pears, in trays, sold at 4/- to 7/6; Apples, Sturmers, 10/- to 12/-; Jons., 13/- to 14/-; Del., 12/- to 14/-.

Ex the "Ionic."

The fruit ex "Ionic" was somewhat overripe. Winter Nelis selling at 2/- to 4/-, and Barrys at 3/- to 4/-; Apples, Sturmers, 10/- to 12/-; Del., 12/- to 14/-; Jons., 13/- to 14/-.

Ex the "Chitral."

The "Chitral" shipment of Australian Apples realised:—**Tasmanian** Sturmers, 9/- to 12/6 a case; Adam's Pearmain and Scarlets, 9/- to 12/6; Cleos., 10/- to 12/-; Jons., 8/- to 12/-; **South Australian** Romes and Nick-a-jacks, 11/- to 13/-; Cleos., 11/- to 12/6; Rokewoods, 12/6 to 14/-; and London Pippins, 10/6 to 12/-.

Ex the "Tongariro."

New Zealand Apples, "Tongariro" shipment:—Sturmers, 10/6 to 12/6; Del., 13/- to 15/-; Doughertys and Rokewoods, 13/- to 14/-; Pears were landed in excellent condition, Winter Nelis sold at 4/- to 7/6 a tray; Josephines, 6/- to 8/- a tray.

Ex the "Somerset."

The "Somerset" shipment of Pears from **New Zealand** was of variable quality, Winter Nelis Pears realised 7/- a tray; Apples, Del., 12/- to 14/-; Jons., 13/- to 14/-; Sturmers, 10/- to 12/-.

Ex the "Zealandia."

The "Zealandia" shipment from **New Zealand** realised similar prices to the Apples from the steamer "Tongariro."

Ex the "Fordsdale."

The "Fordsdale's" **Victorian** Apples realised:—Sturmers, 8/3 to 13/-; Rokewoods, 10/6 to 14/6; Granny S., 13/6 to 16/-; Dunns, 10/6 to 14/-; Del., 9/6 to 11/6; **Tasmanian** Sturmers, 7/- to 13/-; Cleos., 8/- to 13/-; French Crabs, 9/- to 13/-; Scarlets, 8/3 to 14/-; and Rokewoods, 12/- to 13/6. **West Australian** Oranges were in excellent condition, but were somewhat small, and brought 6/- to 9/- per tray.

Ex the "Port Darwin."

The "Port Darwin's" **Tasmanian** Apples sold as follow:—Sturmers, 7/3 to 11/6; Scarlets, 8/3 to 12/-; Newtowns, 10/- to 12/-; Romes, 8/6 to 12/6; Jons., 7/- to 10/6; **Victorian** Romes, 8/6 to 9/3; Granny Smiths, 12/- to 14/-; Jons., 8/6 to 10/-; others, 7/6 to 12/6.

Liverpool.

Ex the "Trojan Star."

Tasmanian Sturmers, 9/- to 11/6; Dunns, 9/- to 9/6; Jons., 7/9 to 12/6; Cleos., 9/- to 12/6; **Crow Eggs**, 8/9 to 10/3; French Crabs, 9/- to 12/6; and many wet sorts of all varieties brought 5/- to 8/-.

Ex the "Euripides."

Apples sold as follow:—**Tasmanian**: Cleos., 11/- to 14/6; Sturmers, 10/- to 12/6; Jons., 9/6 to 13/-; Scarlets, 10/- to 12/-; Crabs, 10/9 to 13/9. **Victorian**: Jons., 10/6 to 14/-; Romes, 10/- to 13/9; Dunn's, 10/- to 13/3; Rokewoods, 12/3 to 13/9. **South Australian**: Romes, 12/- to 13/9. **Tasmanian** Pears in cases brought 21/- to 27/6.

Ex "Port Darwin" and "Vedic."

Reports indicate that the "Port Darwin" and "Vedic" shipments contained a number of wet cases, into which a surveyor is inquiring. The following realised:—Sturmers, 10/- to 13/-; French Crabs, 13/6 to 15/9; Jons., 12/- to 15/-; Del., 13/- to 14/6; and Cleos., 10/- to 17/-; Scarlets, 10/- to 14/-.

Hull.

Ex the "Trojan Star."

Tasmanian Cleos. sold at 8/9 to 12/-; Jons., 8/3 to 11/3; Sturmers, 8/- to 10/3; Munros., 9/3 to 11/6; French Crabs, 9/- to 11/9.

Ex the "Telamon."

A good demand was received for the "Telamon's" fruit. Sturmers brought 11/9 to 14/3; Jons., 11/6 to 14/9; French Crabs, 11/6 to 12/6; Cleos., 11/9 to 14/-; and Crow Eggs, 11/6 to 13/-.

Ex the "Jervis Bay."

Prices of Apples have kept up unexpectedly well. Those by the "Jervis Bay" marketed at London and Hull, sold at:—Sturmers, 9/6 to 13/- a case; Rome Beauty, 10/- to 12/6; Scarlets, 10/- to 12/6; French Crabs, which were ripe, 9/- to 11/-; Five Crown, which were wasty, 8/- to 9/6; and Rokewoods, 11/- to 13/-.

Hamburg.

Ex the "Port Fremantle."

Tasmanian Apples shipped by the steamer "Port Fremantle," sold as follow:—Sturmers, 9/- to 14/6 a case; Scarlets, 9/9 to 13/6; Rome Beauties, 11/- to 14/-; Democrats, 11/- to 16/6; Cleos., 11/- to 17/-; Jons., 10/- to 15/3; Munros, 14/6.

GERMAN FRUIT SALES.

Bremen, 13/6/28.

We have received from the Fruchthandel Gesellschaft (Scipio & Fischer) details of the sale of 11,575 cases of Tasmanian Apples per s.s. Edda, on June 13th at Bremen. The catalogue shows the prices realised for the various brands and marks. The following is the market report issued by the firm mentioned:—

Quality and condition of the fruit was normal. There was a good demand throughout the sale, and we were able to dispose of the total quantity at satisfactory figures.

The prices ranged as follows, according to quality, colour, condition and size. (For ready comparison, calculate the mark at 1/-):—

Tasmanian: Cleos., M. 12.50 to 16.25 (mostly 13.50 to 14); Jons., M. 12 to 15.75 (13 to 15); Sturmers, M. 11 to 13.25 (11.25 to 12); Duke of C., M. 11 to 14.50 (11 to 13); S.P.M., M. 11 to 15 (11.50 to 12); A.P.M., M. 12.25 to 14.50; Munroes, M. 12.50 to 14.

South Australians: Cleos., M. 12.50 to 15 (mostly 14 to 14.50); Dunns, M. 14 to 15.50 (14.50 to 15); Romes, M. 12.50 to 14 (13 to 13.50).

The Bremen market can easily take 15,000 to 20,000 cases per week, or 30,000 to 40,000 cases every fortnight, and we have no doubt but that the various steamship lines which carry the Australian Apple crop to Europe will allot to exporters the space required for above quantities and give direct discharge at Bremen Town if they take up negotiations in good time and produce evidence that the Bremen market is fast developing as an important outlet for Australian Apples.

Hamburg, 14/6/28.

Messrs. Timm & Gerstenkorn, Fruchthof, Hamburg, have submitted copies of their catalogue of fruit sales on June 14th. From 8,177 boxes of Australian Apples, ex "Idomeneus" and "Port Gisborne," together with lots from previous shipments, a total of 60,715 cases were offered. The prices realised were as follows:—

South Australian: Cleos., M. 12 to 15 (majority M. 13 to 14.50); Dunns' (few), M. 12.50 to 16.50; Jons. (few), M. 11 to 14.50; Romes, M. 11.50 to 15 (M. 12 to 13.50).

Tasmanian: Cleos., M. 12 to 17.50 (M. 13 to 14); Dunns', M. 13 to 17; Jons., M. 11 to 15 (M. 12.50 to 14); Sturmers, M. 11 to 13 (M. 11.50 to 12), according to quality, condition and sizes.

NEW SOUTH WALES.

Mr. F. Chilton, City Fruit Markets, reports under date 17/7/28 as follows:—

The Sydney market still continues to be heavily supplied with Apples and citrus fruits. The demand is fair for all choice lines, but dull for medium and inferior qualities.

Winter crop Pineapples are now coming forward freely, and prices are much easier.

Queensland Fruits.—Bananas, 12/- to 24/- per case; Papaws, 10/- to 18/-; Pines, smooth leaf 7/- to 10/-, Ripleys 7/- to 9/-; Tomatoes, 5/- to 9/- per half-case; Custard Apples, 3/- to 7/-. New South Wales Fruits.—Bananas, 14/- to 25/- per case; Lemons, 4/- to 7/- per bus. case; navels, 6/- to 8/-; Mandarins, 3/- to 8/-; Oranges, main crop, 3/- to 6/-; Sevilles, 4/- to 5/-; Grapefruit, 5/- to 8/-; Apples, Jonathan 5/- to 7/6, R.B. 5/- to 8/6, London Pippin 3/- to 5/-, G.S., 6/- to 10/-; Pears, P.T. 7/- to 11/-, W.C. 5/- to 11/-; Passions, 8/- to 21/- per half-case. Victorian Fruits.—Pears, Jos. 8/- to 11/- per bus. case, P.T. 8/- to 11/-, W.C. 6/- to 10/-, B.B. 4/- to 7/-; Apples, Jonathan 6/- to 7/6. Tasmanian Fruits.—Pears, W.C. 3/- to 6/- per half-case, W.N. 3/- to 5/-, Jos. 4/- to 6/-; Apples, Jonathan 5/- to 7/6 per bus. case; Del. 5/- to 8/-, F.C. 5/- to 6/-, N.Y.P. 4/- to 7/-, Arom. 4/- to 6/-, S.P.M. 4/- to 7/-.

VICTORIA.

Melbourne (30/7/28).

The following are the prices ruling at the Western Market:—

Apples, dessert, 2/6 to 6/- per case; do., cooking, 2/- to 5/-. Lemons, Vic., 7/- to 9/-; Mandarins, 7/- to 10/-; a few special higher; Vic. common Oranges, 6/- to 9/-; N.S.W. do., 5/- to 6/-; navel Oranges, Murray districts, Vic., good counts, 11/- to 14/-; large sizes, 7/- to 10/-; Murray district, S.A., good counts, 13/- to 17/-; large sizes, 10/- to 12/-; others, 8/- to 11/-, and 6/- to 7/-; Pines, 10/- to 12/- per double case. Bananas, special, 19/- to 21/-; choice, 16/- to 19/-, and standard, from 10/- to 14/- per double case.

The Victorian Central Citrus Association reports that lighter supplies of citrus fruits caused a firmer tone, and accumulated stocks were cleared. Victorian and border navels sold as follows:—60's, 7/- to 8/-; 75's, 8/- to 9/-; 84's, 9/- to 10/-; 96's, 10/- to 11/-; 112's, 11/- to 12/-; 126's and upwards, 13/- to 14/-. A few special brought higher prices. Mandarins, good counts, 8/- to 11/-; smaller sizes were difficult to sell. Lemons, 7/- to 9/-; common Oranges, 6/- to 8/-.

SOUTH AUSTRALIA.

Adelaide (21/7/28).

Apples, Jons. 6/- to 7/- per case, Cleos. 6/- to 7/-, eating 4/- to 6/-, cooking 3/- to 4/-; Bananas, 28/- to 30/- per crate; Lemons (green), 6/- per case; nuts, Almonds, 12/- per dozen lb.; Oranges, 6/- to 8/- per case, blood 8/-, Mandarin 12/- to 14/-, navel, locals, 13/- to 14/-, navel 11/- to 14/-, poorman 6/- to 7/-; Passion Fruit, 50/-; Pears, eating 5/- to 7/-; Pines, 18/- to 20/-.

TASMANIA.

Hobart (21/7/28).

Apples, Delicious 4/- to 4/6, C.P.M. 3/6 to 5/-, N.Y.P., choice, 6/- to 7/6, fair 4/6 to 5/6, small ditto. 2/6 to 3/-, S.P.M. 3/- to 4/6, H. 2/6 to 4/-, F.C.P. 2/6 to 3/-, M.F. 3/-, Democrats 5/- to 6/-, C.E. 2/3 to 3/3, Jonathans 2/6 to 4/-; Pears, B.B. 9/6 to 9/9 per case.

WESTERN AUSTRALIA.

Perth (20/7/28).

Producers' Markets Ltd., James-street, Perth, report under date 20/7/28 as follows:—Fair supplies of fruit forward for to-day's auction. Granny Smiths and Yates Apples eased, with other lines at previous rates. Navels of good quality sold to a steady demand, but values for large and other grades easier. A few cases of Geraldton Tomatoes forward realising 36/- per ¾ bushel case.

Apples, Yates dps. 13/- to 18/3, others from 9/-, Rokewood 9/- to 11/6, Rymer 9/6 to 11/6, Blonden 13/6, Cleos. 14/6, G. Smith 12/- to 17/9, Doherty 13/- to 15/6, Dunn's, 12/- to 15/6, others from 11/-, Pioneer 10/- to 11/6, all dump cases; Navels 9/- to 14/9, ¾ bushel 6/- to 10/6, others from 4/6; Oranges, 4/- to 5/6; Mandarins, 9/- to 15/3, others from 5/-; Lemons, 4/- to 8/6; Tomatoes, 18/- to 19/6; Passion Fruit, ½-bus. 16/6; Tomatoes, Geraldton, to 36/-.

QUEENSLAND.

Brisbane (24/7/28).

Local Fruit.—Lemons, 1/6 to 8/- a half-bushel case; limes, 1/6 to 3/-; Oranges, large 5/- to 6/- a bushel case, small 3/- to 4/-; navels, 9/-; others, 5/- to 7/-; Mandarins, Glens 7/- to 10/-, Feutrals 4/- to 7/-, Emperors 5/- to 10/-, Scarlets 3/- to 9/-; Papaws, ripe 3/- to 6/-, green 2/- to 3/- (very slow); Pines, rough 5/- to 6/- a case, smooth 4/- to 7/-; Passion Fruit, 5/- to 8/- a half-bushel case; Custard Apples, 3/6 to 4/- a quarter-case. Imported Fruit.—Apples, Tasmania, Jons. 9/- to 11/- a bushel case, N.Y.P. 7/- to 8/-, A.R.O. 6/- to 8/-, T.P. 6/- to 8/6, S.P.M. 6/- to 9/-, A.P.M. 5/- to 6/-, F.C. 3/- to 9/-; Victorian, Jons. 9/- to 11/-, R.B. 7/- to 9/-, Y. 7/- to 9/-, F.C.P. 5/- to 6/-; Pears, Tasmanian, G.S. 8/- to 10/-, E.B. 5/- to 6/-; Victorian, Josephines 11/- to 13/-, W.N. 10/- to 12/-, E.B. 6/- to 9/-, K. 6/- to 7/-; New South Wales navel Oranges, 9/- to 10/- a case.

NEW ZEALAND.

Dunedin (20/7/28).

Reilly's Central Produce Mart report under date 20/7/28 as follows:—

Very large consignments of citrus fruit continue to arrive. On the whole, there is an excellent demand for choice quality American Valencia Oranges, realising 40/-; American Mission brand Lemons, 300's, 55/-; American Grapefruit, 80's to 100's, 40/-; N.Z. grown Tauranga Lemons, dump cases, 18/-; N.S.W. Lemons, 20/-; Victorian, 22/-, for choice; and Adelaide, large sizes, choice Lemons, 22/6.

Gin cases of N.S.W. Mandarins, choice, 18/- to 20/-; Victorian Adelaide dumps, 23/-; N.S.W. navels, gins, choice, 20/-, medium 16/-; Victorian Adelaide dumps, choice sizes, 20/-, medium 17/- to 18/-; N.S.W. Poormans, 14/-; Victorian Adelaide, 19/-; N.S.W. smooth-skinned Sevilles, 17/6; Victorian Adelaide, dumps, 19/-; N.S.W. Passions, half gins, 24/-; Queensland Pines, Ripleys, selected, 28/-; Queen Pines, selected, 26/6.

HENRY FORD—ORCHARDIST.

One of the largest orchards in Kentucky, is being developed by Mr. Henry Ford, of motor fame. The Ford orchard now comprises 12,000 trees, mostly Apples, Plums, Peaches, Pears, and Cherries.

HOW TO GROW TOMATOES.

New Use for Motion Pictures.

The uses to which the motion picture can be put, is unlimited. As a means of giving instructional education to farmers, it should prove of immense value, and it is now being extensively used for this purpose in the United States of America.

A two-reel movie picture on the Tomato industry has been made by the Corneli Seed Company of St. Louis, U.S.A., in co-operation with the Department of Agriculture. The complete story of the Tomato from the seed to the table is shown, and then follows an analysis of the various diseases which may affect them, together with the necessary treatment. The picture is available to all growers' Associations, or in fact, any organisation vitally interested in Tomato growing.

A NEW INSECTICIDE.

Safer Than Arsenic.

Recent tests conducted by the Tennessee Agricultural Experiment Station, with sodium fluosilicate, indicate that this material is more toxic to insects and not so dangerous to humans as arsenic.

With certain pests, such as Cucumber beetles, blister beetles, and flea beetles (who will not touch anything sprayed with arsenic), it was found that the dusted sodium fluosilicate killed them readily.

Apple growers who are looking for a substitute for arsenic, will find sodium fluosilicate excellent for codlin moth destruction, used as a dust, mixed with bran, it makes an excellent bait for cutworms and grasshoppers.

Chicken lice were found to be effectively controlled by it, and in tests against boll weevil, sodium fluosilicate was found more efficient than calcium arsenate.

It is of interest to note that sodium fluosilicate is made from phosphate rocks, the same material that furnishes us with fertiliser. Phosphate rock usually contains about three per cent. calcium fluoride and some silica. When sulphuric acid is introduced for the purpose of making acid phosphate, gaseous silicon tetrafluoride is liberated, forming hydrofluosilic acid. When common salt is added, the sodium fluosilicate is formed. In most cases the fluosilic acid is not saved because there are not many uses known for it.—"Seed World."

BANANAS ADVERSELY AFFECT CALIFORNIA FRUIT SALES.

An article in the "Pacific Rural Press," by Frank Honeywell, has caused a flutter among fruit interests in California.

Mr. Honeywell, on a recent visit to Jamaica, discovered that many new Banana plantations were being opened up, and already Jamaica exported 17,500,000 bunches yearly. The United Fruit Company, he learned, was also planning to invest 12,000,000 dollars in the production of Bananas on the Pacific coast of Panama.

The point stressed by the California fruit interests, is, that this fruit, which will be grown by cheap colored labor, will adversely affect Californian fruit. Another sore point is the fact that the new projects are being supported by American capital.

The invasion of tropical fruit, grown by cheap colored labor on low-priced land, offering active competition with highly specialised products grown under exactly opposite conditions, is a matter of grave concern to the Californian fruitgrower, for as the writer points out, there is a limit to the consuming ability of even a prosperous American, and when these cheap Bananas come on the market, Californian fruits must lose sales.

MALAYA PINEAPPLES.

There has been a striking increase in the export of Pineapples from British Malaya to England. During one month of this year, 4,140 tons of the fruit was shipped to London. More than double any previous shipments.

WHEN JUSTICE WINKS.

The magistrate bent stern brows on the defendant.

You are charged with exceeding the speed limit last night," he exclaimed. "Are you guilty or not guilty?"

"Well, you can decide for yourself, judge," replied the prisoner. "I was in that car you passed just before they pinched me." — "American Legion Monthly."

LIME FOR THE LAND

Burnt Agricultural Lime (Calcium Hydrate), 20 bags to the ton, assay nearly 80 per cent. CA (HO), per ton on trucks Curdie, including bags, but less 10/- per ton for 11 or 16-ton truck loads.

Unburnt Agricultural Lime (Calcium Carbonate), 12 bags to the ton, assay 92 per cent. (CaCO3), per ton on trucks Curdie, including bags.

All our Limes are well screened, fit for the drill, and suitable for agriculture or top-dressing. Brings up the clover and strengthens the stock.

It is false economy buying a low grade Lime at under 40 per cent. of Lime, because you require twice as much to get the same results as with the above Lime. It means twice the bags, railage, cartage and labor. Therefore, buy the concentrated, and get the results you are after.

Write for Prices, Mention this Paper.

FARMERS AND FRUITGROWERS ARE INVITED TO APPLY FOR COMPLIMENTARY COPY OF "THE FLOCK-OWNERS' FRIEND."

RUDDS' SPECIALTY, "WHITE SWAN" Spraying Lime, in 40 lb. Lever-top Tins. Highest grade, specially selected for Vines and Fruit Trees.

J. H. RUDD & CO. PTY. LTD., 115 William Street, Melbourne

Do Read the

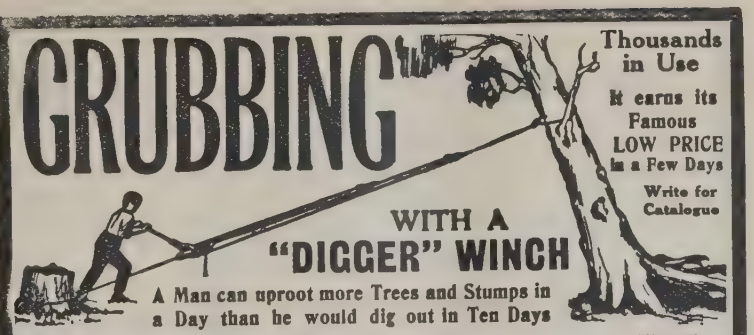
"Garden Lover"

Write for Sample Copy

to

Garden Lover
Box 1944 G.P.O.
Melbourne

GRUBBING



Thousands in Use

It earns its Famous LOW PRICE in a Few Days

Write for Catalogue

WITH A
"DIGGER" WINCH

A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days

QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

SUPPORT CO-OPERATION

By Consigning your FRUIT to the

Producers' Distributing Society Ltd.

(Late Coastal Farmers' Co-operative Society Ltd.)

Agents for
"BLACK LEAF 40"
and all Orchard Requirements

Melbourne Sydney
Newcastle Hobart
Launceston Devonport

Fruit Trees Still in Stock at

James W. Lawrey's

KINGLAKE NURSERIES - - YARRA GLEN

APPLES.

Jonathan, Stewart's Seedling, Five Crown, Democrat, Cleopatra, Delicious, Granny Smith, Gravenstein, King David, Yates, Rome Beauty, Rymer.

PEACHES.

Brigg's Red May, Hales Early, High's Early Canada, Phillip's Cling, Pullar's Cling, Smith's Seedling, Thiele's Cling, Pelora Cling, Wiggin's Zerbe.

SEND YOUR ORDER NOW.

JAMES W. LAWREY, Kinglake Nurseries, Yarra Glen

Fruchthof-Bremen

Fruchthandel Gesellschaft

Scipio & Fischer

Fruchthof BREMEN Germany

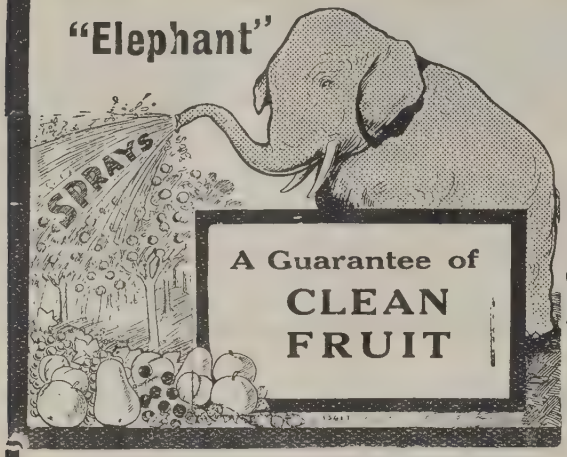
Cable Address: "Orange" Bremen . . . Established 1902

AUSTRALIAN REPRESENTATIVES:

Victoria: The International Fruit & Mercantile Co., 410-416 Flinders Lane, Melbourne.

West Aust.: Messrs. Paterson & Co., Ltd., Perth.

Tasmania: Messrs. E. R. Cottier & Co., Hobart.



ORCHARDISTS

Spraying is essential, and your best Insurance. Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand

Sprays Only

NOW IS THE TIME TO ORDER YOUR SPRAYS.

Use "Elephant" Brand

Prepared Red Oil

Manufactured from a heavy bodied mineral oil, combined with ingredients only necessary to bring about a perfect emulsion when mixed with cold water.

THIS OIL CONTAINS 85% PURE MINERAL OIL.

also

Prepared Crude Oil

ORDER NOW.

Bordeaux Mixture Powder

Equal in quality and Price to the best Imported

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of "Elephant" Brand Sprays

Manufacturing Chemists, MADDEN GROVE, BURNLEY, E.1., MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for September, 1928.

Apple Advertising Campaign 345

Banana Growing in Queensland 362–3

Beekeeping Notes 379

Berry Fruits—Cool Storage 349

Canned Fruits 337

Citrus News—Items of Interest 366–7

Cold Storage Dept.—
- Fruitgrowers' Cool Stores' Association 341–3
- Cool Stores Management 343–4
- Temperature Factor in Cool Storage 344–5
- Advertising Campaign .. 345
- Cool Stores' Balance-sheets 346–7
- Application of Electrical Methods 347–9
- Cool Storage of Berry Fruits 349
- Results of Electrical Operation 352

Electrifying the Soil 359

Fruits for the Home Garden 372

Fruit Juice Drinks 335

Garden Brevities 364

Grape-cutting Device 334

Insect Pests in the Orchard 369

Letters to the Editor 332

Markets—British and Australasian 376–7

Marketing Fruit in England 368

Marketing—London's Facilities 377

News and Notes 331

New South Wales—District News and Notes 336–7

Obituary 359

Orchard Management 334–5

Packing Fruit 380

Paper Mulch Increases Crops 370–1

Personal 359

Poultry Notes 379

Queensland—Citrus Bud and Stock Selection—Banana-growing 360–3

Spray Plant—Stationary .. 374–5

Tasmania—Advisory Board Meeting—Orchard News and Notes 338–40

Victoria—Crop Prospects .. 340

INDEX TO ADVERTISERS.

Books, Publications—

"Garden Lover," Bank House, Bank Place, Melbourne, p. xxv., xiii.

"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii., xxv.

Canning Machines—

Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. xii.

Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—

Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—

"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. 372.

Fruit Buyers—

Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xx.

Fruit Tree Suppliers—

Brunning, John, and Sons, Somerville, p. 330.

Ferguson, F., & Son, Hurstville, N.S.W., p. xxi.

Lawrey, J. W., Yarra Glen, Vic., p. xiii.

C. A. Nobelius & Sons, Emerald, Vic., p. 371.

Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 368.

Two Bays Nurseries, Mooroduc, Vic., p. xxii.

Fruit Graders—

"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood Vic., p. 353.

"Harvey-Delany," D. Harvey, Whitehorse Road, Box Hill, p. 373.

Fruit Picking Bag—

The "Bay View," F. R. Mellor, 440 Elizabeth St., Melbourne, p. 360.

Manures, Fertilisers, &c.—

Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. 354-5, 369.

"Blood," Melbourne City Council, p. 368.

Bone Dust, P. Fitzgerald & Sons, Warragul Rd., Oakleigh, Vic., p. xxii.

"Nitrophoska," "Urea," Dyes & Chemicals (Aust.) Ltd., Sydney & Melbourne, front cover.

"White Star" Lime, J. H. Rudd & Co. Pty. Ltd., 115 William St., Melbourne, p. xvi.

Orchard Ploughs, Cultivators, &c.—

D. Harvey, Box Hill, Melbourne, p. 373.

Orchard Requisites—

McPherson's Pty. Ltd., 582 Collins St., Melbourne, Vic., p. xv.

Patent Attorney—

Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. 380.

Poultry—

Karswood Poultry Spice, Agents all States, p. 378.

"Lima" Egg Case, J. E. Handbury & Son Pty. Ltd., 33 King St., Melbourne, p. 379.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—

Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xix.

Spray and Dusting Material—

"Aero" Brand Arsenate of Lead, A. M. Bickford & Sons Ltd., 42-44-46 Currie St., Adelaide, p. xvii.

Arsenate of Lead, William Cooper & Nephews (Aust.) Ltd., Sydney; agents all States, p. xv.

"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. iv.

"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.

"Elephant" Brand, Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. xiv.

"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.

"Clensel," Clensel Pty. Ltd., 184 Queen St., Melbourne, p. 371.

"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. xiii.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Sydney, p. 367.

Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. ix.

"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 375.

"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 361.

Neptune Oil Co., 365 Kent St., Sydney, and all States, p. xviii.

Spray Pumps and Guns—

"Bave-U" Power Sprayer, Russell & Co., Box Hill, cover ii.

"Cooper," Cooper Engineering Co. Ltd., Sydney and Melbourne, p. xii.

604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. xi.

"Nufrend," Metters Ltd., 98 North Terrace, Adelaide, S.A., p. xviii.

Ronaldson Bros. & Tippett Pty. Ltd., Creswick St., Ballarat, p. xxi.

"Sunshine Sprayer," H. V. McKay Pty. Ltd., Sunshine, Vic., p. xxi.

T. W. Sands, 372 Lonsdale St., Melbourne, p. 374.

Strapping Fruit Cases—

Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.

"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. xx.

Tractors—

"Smithco" Friction Lift Co., 110 Sturt St., Sth. Melbourne, p. v.

Transport—

London and N. E. Railway, Burns, Philp & Co., agents, p. v.

Tree and Stump Pullers—

Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix., 356.

"Digger" Quick Manufacturing Co., 75 Pender St., Thornbury, p. xiii.

Wire—

Commonwealth Barbed Wire & Nail Works Pty. Ltd., 94 Sturt St., Sth. Melbourne, p. xxii.

Fruit Trees

for 1928 Planting

APPLES	QUINCES	CHESTNUTS	OLIVES
PEARS	FIGS	GOOSEBERRIES	GUAVAS
PLUMS	CHERRIES	CURRANTS	BRAMBLES
PRUNES	WALNUTS	RASPBERRIES	LOQUATS
ALMONDS	ORANGES	NUTS	PERSIMMONS
APRICOTS	LEMONS	MEDLARS	VINES
PEACHES	MANDARINS	POMEGRANATES	STRAWBERRIES
NECTARINES	MULBERRIES	PASSIONS	RHUBARB
			LOGANBERRIES

All Leading Varieties from—

JOHN BRUNNING & SONS

Somerville Nurseries - - - Somerville, Victoria, Australia

ESTABLISHED 1866

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

HEAD OFFICE:

78a VICTORIA STREET, Melbourne, Victoria.

Address all correspondence to

Box 1944 G.P.O. Melbourne

Sydney Office: Post Office Chambers, 335 George Street, Box 2147.L.L., G.P.O. FRANK CLARKE, Representative.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

IMPERIAL FRUIT SHOW.

Classes for Dominion Growers.

A statement issued by the British Markets Department invites exhibits of fruit from Dominion growers for the Imperial Fruit Show, which is to be held at Manchester (England), commencing 19th October. Classes of interest to Australian growers are summarised as follows:—

Overseas Apple section, open to growers and exporters—15 classes.

Overseas Apple sub-section, open to growers only—14 classes.

Citrus and Pineapple section, open to growers, packing houses, growers' associations, and exporters.

Canned fruits, grown and canned within the Empire—18 classes.

Dried fruits grown within the Empire—nine classes.

Three growers' classes are provided in the large fruit section.

GASSED.

Wifie: "You seem disappointed with your parcel."

Hubby: "Yes. I answered an advertisement for a device to keep down gas bills, and the firm sent me a paper-weight."

News and Notes.

Williams Pears are being planted freely in Tasmania to supply the needs of local canneries.

EUROPEAN APPLE AND PEAR CROP.

Bigger Than Last Season.

Trade reports indicate that the European Apple and Pear crops will be larger this season than those of last year. The prospects in Canada are also good. Frosts caused some damage in Southern Europe to the Pear crop, but the crop will be larger than last year's poor crop.

PINEAPPLE ORANGE.

Oranges with a strong Pineapple aroma are grown at Orange Lake, Florida, U.S.A. They are the progeny of a freak tree that dates back to 1871. The present grove, which yields thousands of boxes annually, is the property of Messrs. Crosby and Wartmann, well-known Florida growers of citrus fruits.

THE CAWTHRON INSTITUTE, N.Z.

Valuable Lectures.

We acknowledge having received from the Cawthron Institute, Nelson, N.Z., a copy of their Volume No. 3, containing the following valuable lectures:—A Popular Account of Evolution (by Dr. J. P. Lotsy, Velp., Holland); Electricity and Matters (Sir Ernest Rutherford, Cambridge); Recent Advances in Astronomy (J. T. Ward, Wanganui Observatory); Athens, Florence, and the Modern State (Prof. A. J. Grant, Professor of History, Leeds).

SPEEDING UP PINEAPPLE PLANTING.

A Japanese employee of the Hawaiian Dredging Co. has patented a novel machine, which will prepare Pineapple crowns for planting. The device will turn out 180 crowns a minute. Crowns for planting are at present laboriously prepared by hand.

FRUIT PACKING CHART.

Useful Wall Chart Issued by Victorian Department of Agriculture.

We have received from the Department of Agriculture, Melbourne, a copy of their instructive wall chart, which gives particulars as to packing Apples in the standard case. It is well illustrated. Information is given regarding the proper grading and packing of Apples. Copies of this valuable wall chart are obtainable from the Department of Agriculture, Melbourne, C.1.

A NEW METHOD OF PRESERVING FRUIT IN GERMANY.

According to an American Consular report from Berlin, a German engineer named Karl Hessel, has, with many years of research, developed a new method of preserving fresh fruit for indefinite time at a very low cost. The fresh fruit is reduced to a dry powder, which is pressed into small briquets and retained in this form indefinitely. When the briquet is dissolved in water, the substance and taste of the fresh fruit is revived. It is claimed that dried powder preserved in this way can be used in winter at a saving of around 80 per cent. of the price of fresh fruit out of season in Germany. Both fruit and vegetables are preserved in this fashion, and in many cases the rind or peel is also preserved. This retains the essential oils and aroma of fresh fruit, and since the product is cooked at a temperature of approximately 170 degrees Fahrenheit, the vitamines are practically all retained.

For retail trade, briquets are packed in pasteboard cartons, and may be easily shipped, preserved and stocked. They can be prepared with chocolate covers and put into dice form, made into cakes, or small sticks. They can be covered with sugar, or glaced like many varieties of preserved fruit at present. In the kitchen the powder can be used as sauce, compote, ice-cream filling.

The report states in conclusion that the German Ministry of Agriculture and other Government officials have examined the new process and given their approval of it.

CANADIAN FRUIT CROP.

The value of the Canadian fruit crop in 1927 is estimated at 17,416,632 dollars, as compared with 15,224,570 dollars in 1926. The total production of Apples was 2,817,000 barrels, as against 2,954,370 barrels in 1926. An increase in value per barrel, however, from 3.28 dollars to 3.65 dollars, resulted in the value of the 1927 Apple crop being 10,285,995 dollars, compared with 9,688,162 dollars in 1926. Larger crops of Pears, Peaches, and Grapes were largely responsible for the increase in the total value of 2,192,062 dollars. The increase of the Grape yield was outstanding, 34,560,000 lb., valued at 1,382,400 dollars, compared with 24,000,000 lb., value 720,000 dollars, in 1926. The Pear crop is given as 335,600 bushels, value 713,690 dollars, compared with 266,440 bushels, value 450,840 dollars, in the previous year. The commercial Peach crop is estimated at 350,060 bushels, valued at 1,045,850 dollars, compared with 237,950 bushels, value 603,658 dollars, in 1926. The berry crops show little change, an increase in the Raspberry and Strawberry crops being offset by the decline in the harvest of other berries.

ENGLISH FRUIT CROPS.

Medium Apple Harvest Anticipated.

The 1928 English Apple crop, which is harvested in August, September and October, promises to be medium.

The official forecast on all fruit crops, issued on July 1, is as follows:—

Fruit.

Apples (Culinary). — Early Victoria, Grenadier, Lane's Prince Albert, fair crops; Bramley's Seedling and Newton Wonder, mostly light

Apples (Dessert).—Gladstone, James Grieve, Worcester Pearmain, Allington Pippin, Cox's Orange Pippin, and Blenheim Orange, very fair to good. Beauty of Bath not quite so good.

Apples (Cider).—Variable but late kinds are likely to give a fairly good crop.

Cherries.—Much dropping has occurred and crop can only be described as light. Among dessert Cherries, Early Rivers, Waterloo and Amber are the best, being fair.

Currants (Black).—Very patchy; some places have good crops and others poor. There has been a good deal of running off and for the whole country the crop will be light.

Currants (Red).—Crop fair to good generally.

Gooseberries.—Crop variable; on the whole, fair.

Pears.—Crop generally fair, though dropping has reduced the crop to a light one in some parts. Fertility fair to good; Conference, Hessle, Williams and Jules Guyot, fair.

Plums (Ordinary).—Fairly heavy dropping has occurred, and crops are patchy. Czar good; Prolific, Pershore, Purple Pershore and Monarch, very fair; Rivers and Victoria, only fair.

Plums (Gages).—Generally very light.

Plums (Damsons).—Patchy. Light crops generally; good in Shropshire, Aylesbury Prune light.

Raspberries.—Canes are healthy and look promising.

Strawberries.—Prospects for late varieties and crops from late districts are good.

ATTRACTIVE LABELS.

Help Apple Sales.

The Minister for Agriculture (Mr. Slater), in a recent statement to the Victorian Legislative Assembly, referred to the importance of attractive labels for Australian Apples sent overseas.

The Minister said the Agent-General had reported with regard to the two community packs recently initiated in Victoria with 200,000 cases—Opossum and Diamond brands, both bearing attractive labels—that the brands were attracting particular attention. Buyers liked these packs, as the fruit was of fair average quality throughout. Moreover, the labels were placed at both ends, thus avoiding the necessity for turning over the case in order to ascertain what kind of Apple the case contained, the variety and size. These little points counted for a great deal in the marketing business. The Trade Commissioner had visited the Rotterdam market during the season, and had reported that the Opossum, Diamond, Bellevue and Peak pack brands were very good. The Rotterdam people liked them, as they were easy to sort out.

The reports, added the Minister, indicated that standardisation of pack and continuity of supply were essential to successful marketing of Victorian Apples. The Department of Agriculture was encouraging the growers to adopt these methods.

Letters to the Editor.

FUMIGATION IN DAY TIME.

The Editor, "Fruit World" of Australasia.

Sir,—We note in the July edition of your journal that in Lower Chittering notes reference is made to the poor result obtained by fumigation of citrus during the day time.

As probably 500,000 trees this season have been fumigated with Cyanogas in the day time throughout Australia with complete results and without injury, many of your readers who, no doubt, have been successful users of Cyanogas, will read the report with amazement, as it conveys the impression that the growers referred to will confine their operations to the now obsolete night work.

There is no question that the growers referred to have made some error in application, for there is no reason why Western Australia should not obtain the same results as other parts of the continent.

Yours faithfully,
Buzacott & Co. Ltd.,
Per E. K. Wolstenholme.
Sydney, 6/8/28.

PURE FRUIT DRINKS.

Queensland Asks for Details from Victoria.

"Queenslander" writes:—Re Orange Juice.—I note that the Commissioner for Railways in Victoria has done a large business at his refreshment rooms in Orange drinks.

Here, we are endeavouring to see daylight on the Orange juice question. Could you assist us by ascertaining the conditions under which your Commissioner for Railways obtains the juice and preserves it? (1) Does he simply sterilise it by boiling, (2) concentrate it, or (3) import it?

Answer.—The Railways Department make their Orange drinks from fresh Oranges, cutting them in the presence of the customer. They use the "Sunkist" extractor, obtainable from the California Fruitgrowers' Exchange, Los Angeles, California, U.S.A.

The Railways Department bought 40,000 cases of Oranges last year, cold storing the Oranges to spread them over the season.

"Queenslander" is referred to the special article on this subject in another part of this issue.

COLD-STORED APPLES AND PEARS.

W.E.B., Orange, N.S.W., asks where he can obtain supplies of oiled paper wraps and shredded oiled paper. He also asks for a list of our main varieties of Pears and Apples which are susceptible to scald, and those not susceptible.

Fruitgrowers' Cool Stores Association of Victoria):—

Re oiled paper wraps and shredded oiled paper. At the moment the only address I have is Mr. Fred. C. Strype, 140 Lafayette-street, New York, U.S.A., but I presume any of the paper importers would be able to supply, if given sufficient notice. Mr. W. Murray, of Vacuum Oil Co., some time ago, was trying out some oiled wraps.

Oiled wraps are not generally used for fruit as it has yet to be demonstrated that it is a commercial proposition to use oiled wraps in cool storage of fruit.

Re Scald.—I do not know of complete tests being carried out as to varieties susceptible to scald and those practically immune. In ordinary cool store practice it is only the commercial varieties that would be noted. Then again, scald is seasonable. It may not make its appearance in bad form for several years, and then, perhaps in one or more districts the others being free.

Jonathan Apples are liable to a soft scald, and Granny Smith, Rome Beauty, Rokewood, etc., to hard scald. Some Pears go black in the skin, but I have no record that this has been proved to be a scald.

MELBOURNE ROYAL SHOW.

For its 57th Grand Annual Exhibition, to be held from 20th to 29th September, the Royal Agricultural Society of Victoria is again offering liberal prize money, the total on this occasion exceeding £8,000, which is a record for the Society. In view of the excellent season being experienced by woolgrowers, stock-breeders, and other industries indigenous to the soil, there is a distinct probability that the 1928 Royal Show will eclipse its predecessors in every way, and result in a record entry and attendance.

Entries for the general classes close on the 18th August, and those for arena events on the 1st September next. Copies of the prize schedule, together with entry forms and all information appertaining to the exhibition, will be furnished on application to the Secretary of the Society, 422 Collins-street, Melbourne, C.1.

Orchard Management.

Seasonable Advice ∴ Manuring ∴ Cultivation ∴ Spraying.

A Broadcast Talk by J. M. Ward, Superintendent of Horticulture, Vic.

After advising a light pruning, liberal manuring, and good cultivation, Mr. Ward continued:—

WHEN the tree is blossoming, it is making a great demand upon plant-food to enable the flowers to set fruit. Should there be a lack of food, a light setting may result. This can be considerably obviated by applying a liberal dressing of fertiliser, such as potash, phosphoric acid and nitrogen.

Manuring Fruit Trees.

Potash should be given in the form of sulphate or muriate of potash, at the rate of 1 cwt. to 1½ cwt. per acre. Phosphoric acid can be applied in the form of superphosphate or bonedust, at the rate of 6 to 8 cwt. per acre. Apply super in September.

To apply nitrogen in a commercial form, such as nitrate of soda, sulphate of ammonia, or dried blood is fairly expensive, but it should be applied to the soil by way of growing and ploughing under of green crops, particularly peas, beans and vetches. Either of these mixed with say barley or oats will give volume for humus, as well as nitrogen. A motto for every grower is **"A green crop in my soil every year."**

Where the orchard has not received the benefit of a green crop, an application of 1 cwt. per acre of nitrate of soda or sulphate of ammonia should be supplied. An extra dressing of about 1 lb. per tree of one of these fertilisers can be beneficially applied during November to trees that have not made good growth in the past; the application of a little extra potash would also be beneficial to the tree and fruit.

Good Cultivation is Essential.

Good cultivation during the growing season is a most excellent and necessary practice in every fruit district in Australia. Many growers are rather neglectful of cultivating their orchards. This was particularly noticeable in some of the orchards in Gippsland, and on the Mornington Peninsula during my visits to these areas recently. Less cultivation may be satisfactory in a deep rich soil; but with the poorer classes of soil on which most of our Apple orchards are planted, good cultivation is essential. Sub-soiling in the centre of the rows to a depth of 20 inches to 24 inches, with one of the many sub-soilers now on the market, can be highly recommended.

Less Water—More Cultivation.

Some growers in the Goulburn Valley and other irrigated areas, are inclined to use too much water, and do too little cultivation. Such growers appear to consider that water will do everything and there is little need to cultivate. This is an error of judgment. By the application of more cultivation and less water, the trees and growers would be better off. A good soil can easily be ruined by the application of too much water. Like fire, water is a good servant but a bad master.

The health of the tree is a very important matter. A healthy tree usually crops well, and is a "paying guest," whereas the unhealthy tree becomes a "non-paying guest" or a "parasite" on the grower's resources. It is really surprising the number of such parasites one can find in the average orchard, and one wonders how it is that growers can afford to keep so many "non-paying guests."

Such trees are not always due to attacks by insects, fungus or bacterial disease; the cause may be due to poor breeding of the tree and therefore beyond the immediate control of the grower.

Disease and Pest Control.

Where trees are unhealthy, owing to the effect of some disease, the trouble may be easily remedied. For instance, growers suffer heavy losses owing to the tree and fruit being affected with such diseases as black-spot of the Apple or Pear, brown-rot of stone fruits, leaf-curl of the Peach, or the effects of attacks by various scale or other insect pests.

Control measures by means of spraying can be adopted for these troubles. In spraying against fungus diseases, it must be borne in mind that the treatment should always be essentially

preventive rather than combative;

for once the organisms have entered their host-plant they are beyond the reach of effective treatment. The aim of the horticulturist should be to coat with a fungicidal spray the tree to be protected, so that when the spore of the disease germinates, its mycelium or root would first come into contact with the applied fungicide that separates it from its host-plant, thus preventing the mycelium threads from entering one of the stoma or breathing pores of the tree to be protected. If these spores settle on an unsprayed tree, they rapidly enter their host (the tree or fruit as the case may be) and feed on its tissues, killing the parts attacked; and it is the inability of these dead parts to expand, and thus keep pace with the growing parts of the fruit that causes the cracks in Apples and Pears when these are attacked by black-spot.

Beware of Shothole, and Brown Rot.

A grower should look upon control measures against disease in his crop from the same aspect as the owner of a home who has his house and furniture insured against fire. In this instance, I would particularly appeal to my fruitgrowing

friends in the Goulburn Valley to adopt even greater control measures for apricot shot-hole and brown-rot than they have done in the past. As is well known, the canneries will not accept Apricots affected with shot-hole fungus, whilst brown-rot may destroy the fruit before or after it leaves the orchard.

Important factors to be observed in spraying are the use of the right materials, proper mixing, correct period of applying, and thoroughness of application. Such work as cultivation and pruning can usually be postponed without causing injurious effects to the tree or fruit; but the application of spraying for disease control cannot effectively be put off until "to-morrow." If the best results are to be obtained from spraying, this work must be accomplished at the psychological moment, and the only thing that should be allowed to interfere with spraying is the weather—over this, man has no control.

As districts and localities vary greatly, I shall state periods for spraying and leave the exact date to the good judgment of growers.

Black-spot of Apples and Pears.—Apple and Pear growers of Victoria and Tasmania, owing to climatic conditions, probably have more trouble with this disease than growers in other States. Some seasons are of course worse than others. From experiments carried out at various times in Victoria during the past few years—more particularly in Gippsland—everything points to orchardists being able

to control black-spot,

by thoroughly spraying the trees with lime-sulphur, at the strength of one gallon of lime-sulphur to 15 gallons of water when from 70 to 80 per cent. of the blossoms are fully out, followed by a second application at the 1-30 strength just after the petals have fallen. Before growers in districts other than Gippsland use lime-sulphur at the strengths and periods mentioned on the whole of their orchard, they are advised to first experiment on one tree, for burning may occur.

Experience in some parts of Victoria and Tasmania shows that excellent results are obtained by spraying with Bordeaux mixture at 6-4-40 (6 lbs. copper sulphate, 4 lbs. fresh lime, 40 gallons of water) applied at what is known as the "delayed dormant" period, i.e., just as the buds are bursting, followed with a further application at 4-4-40 during the "pink" stage—after the buds have opened up, but just prior to the petals coming out. Both the above control measures are highly recommended.

The use of Bordeaux Mixture

is not recommended after the fruit has set, for whilst it is quite effective in controlling black-spot, the mixture causes a considerable amount of russeting, which, to some extent, lessens the market value.

Even when Bordeaux is used at the pink stage, a little russeting will occur. Spraying the Apple tree for black-spot during the dormant season is a waste of time and material, for the spores of the disease are not known to winter on the Apple tree; therefore applications at this period have very little effect upon the spores, but as the warmer weather approaches, the spores arise from the dead foliage and attack the fruit at the stem end of the blossom clusters; whereas the spores of the black-spot of the Pear (Venturia prinia) are known to winter on the tree, and dormant spraying certainly is effective. At the same time there is usually no necessity to especially apply a winter spray to Pear trees to check the spot. If spraying is carried out as outlined excellent results can be obtained.

Brown-rot.—This fungoid disease is more or less disastrous once it makes its appearance in a stone-fruit orchard during a humid season. All diseased fruit and wood should be carefully gathered and burnt—not buried. Trees attacked by brown-rot should receive a thorough spraying of lime-sulphur at 1-9 strength, just before the buds burst. This should be followed with another application of lime-sulphur 1-35 at the pink bud stage. If the season be a wet one, a third or even a fourth spraying may be necessary, in which case a third application 1-80 should be given when the fruit is about two-thirds grown, and the fourth at 1-100 about a month before harvesting.

Leaf-curl of the Peach.—This disease can be controlled by the application of Bordeaux mixture, 6-4-40, at the very early pink bud stage; and also by lime-sulphur 1-9, as given for brown-rot, just before the buds burst.

Apricot Shot-hole.—Apricot scab can be profitably controlled by the application of 6-4-40 Bordeaux, plus 1 lb. lime casein spreader to 100 gallons of spray, applied in the dormant period, and also at the pink bud stage.

NEW GRAPE CUTTING DEVICE.

Patent Thumb Secateur and Knife.

A patent device to secure greater ease and speed in Grape cutting, has just been invented in Australia, and is meeting with favor among Grape growers.

By means of this new thumb secateur, which is worn comfortably on either hand, the fruit is taken by the hand wearing the cutter and in one operation the fruit stem is severed as the fingers and thumb close. This of course applies where ordinary accessibility is available. A protruding knife blade is included as a part of the device in order to open up the vine where the fruit is matted together closely.

A serviceable feature is that this cutter needs not to be pocketed or laid aside. It is worn on the thumb and there it remains quite comfortably as long as desired. It is so made as to accommodate a thumb of any size.

This new patent cutter is also applicable for use in nurseries, private gardens, flower shops, etc., where light quick work is essential. With the aid of this thumb secateur, flower picking is particularly rapid, as the same facility for simultaneous cutting and retention of the article severed is afforded as in Grape cutting.

Pure Fruit Juice Drinks.

The Excellent Service of the Victorian Railway Department.

The details in the article herewith will be followed with close interest by all who desire to foster the development of the fruit industry.

The Victorian Railway Department has given appreciated leadership to the pure fruit drink service. There is a vast field of opportunity as yet undeveloped in the extension of this service throughout Australia.

ONE OF THE MANY EFFORTS made by the Commissioners of the Victorian Railways (Australia) to assist the primary producer to market his produce by creating a home market is to popularise pure citrus fruit juice drinks.

Stalls for the sale of citrus fruit juice drinks at a uniform price of 4d. per glass have been erected at the three railway terminal stations in Melbourne. Stalls at the main stations throughout Victoria sell citrus fruit juice drinks, in addition to fruit, confectionery, tobacco and sundry goods.

The first and most popular of the three city stalls was opened on the 29th November, 1926, on the concourse at Flinders-street railway station, which is the terminus of the suburban lines and of the main country lines running to south-eastern Victoria.

The stall was erected on girders carried over the running lines, and faces the main concourse, from which ramps radiate to the different platforms.

The stall cost £2,386, and the vitrolite counters and shelves £468. The accommodation includes the selling pavilion, office, stores and carbonator rooms.

The white vitrolite counter (45 feet long) and shelves, with the aluminium extractors, and nickel-plated soda and syrup arms, give the stall a sparkling appearance, and enable it to be kept spotlessly clean.

The ten "Sunkist" fruit juice extractors and soda and syrup arms are installed on the counter of the stall. An extractor and two arms are placed conveniently together for the use of each attendant. White vitrolite dados with black vitrolite border surround the inside of the stall, and increase its attractive appearance.

It may be remarked that 65 "Sunkist" fruit juice extractors are in use at different railway fruit and fruit juice stalls, and the number is being steadily increased.

The plant used in the production of citrus fruit juice drinks is as follows:—

Plant.

Automatic carbonators (sodawater-making machines), automatic refrigerated box, "Sunkist" fruit juice extractors, syrup tanks, water filters, soda and syrup arms on counter.

Process.

Ingredients.—Sodawater, pure Orange or Lemon juice, pure sugar syrup.

The water is first purified in high-pressure filters. It is then fed along with the gas, into the carbonators, and there automatically made into sodawater. This is reduced to a temperature below 45 degrees Fahrenheit by passing it through pipe coils in the refrigerated box, from whence it goes to the soda arms on the counter. The sugar syrup is stored in white enamel-lined tanks at sufficient height to allow it to flow by gravitation to the syrup arms on the counter. It is also passed through pipe coils in the refrigerated box to reduce the temperature 45 degrees.

The plain sugar syrup is a commercial product that does not granulate readily when standing in pipes and tanks at a low temperature.

Drink tickets are sold at a cabinet adjacent to the stall, and are presented to the attendant, who then cuts the fruit (Orange or Lemon) in half, and extracts the juice by means of the "Sunkist" extractor: sodawater and syrup are added from the arms on the counter. The whole operation is performed in full view of the customer, who can see for himself that the drink supplied to him is made from pure fruit juice.

The Oranges or Lemons are never cut in half and stored in advance of immediate requirements, but are cut for individual service only, the stall employees being strictly prohibited from storing up juice for rush periods.

In winter months, hot coffee and chocolate are sold in addition to hot and cold citrus fruit juice drinks.

Statements are attached indicating the equipment used at the principal stall, Flinders-street station, which is typical of other stalls.

Main items of plant and equipment in use at the concourse fruit juice stall, Flinders-street station, with cost and number of each item in use:—

2 Automatic carbonators	£140	0	0
10 Soda arms	70	0	0
10 Syrup arms on counter	70	0	0
1 Enamel syrup tank	10	0	0
10 "Sunkist" fruit juice extractors	135	0	0
1 Refrigerated box, complete with compressor	268	0	0
1 Electric sign—"Pure Fruit Drinks 4d."	86	4	6
1 Tricolator (coffee-making machine)	10	14	0
3 Electric urns (hot water)	45	0	0
Lockers for staff	63	0	0
2 Glass-washers	40	0	0
2 Ticket-selling machines	50	0	0
1 Tank for water—50 gallons	15	0	0

The total cost of all the equipment was £1,500.

* * *

The more important units included in the building, with costs, are shown hereunder:—

Shutters (steel roller)	£146	0	0
Flooring (composition)	80	0	0
Electrical installation	109	0	0
Counters and shelves (vitrolite)	468	0	0

The total cost of the stall was:—

Building	£2,385
Counter and shelves	468
Equipment	1,500
	£4,354

Hot Drinks.

In addition to the pure fruit juice drinks, hot drinks are also served during the cold months.

The Railway Department serves:—Hot Orange, hot Lemon, hot milk, hot coffee, hot chocolate.

Three-compartment electric urns are used for the hot drink service. One urn contains hot water, one hot milk, and one hot coffee. High-grade pure coffee is made in tricolators and served with milk. Chocolate is obtained in paste form and diluted with water. It is also prepared with hot milk.

All hot drinks are served in glasses, and to enable the customer to handle the hot glass, we place them in E.P.N.S. holders. With hot coffee, chocolate and milk we serve a biscuit.

Sugar is supplied in loaf form, two pieces being placed in a paper envelope.

In addition to the ordinary equipment, the following equipment is used for the hot drink service:—

3½ doz. E.P.N.S. holders for glasses	£23	2	0
3½ doz. N.S. stainless spoons	2	2	0
1 No. electric sign, "Hot Drinks, Orange, Lemon, Coffee, Milk, Chocolate"	19	0	0
2 No. 3 compartment electric urns	33	0	0
1 No. coffee tricolator	12	10	0

New South Wales

District News and Notes.

(By Our Special Correspondent)

PERSONAL.

Mr. Such, Secretary of the Central Citrus Growers' Association of N.S.W., and member of the board of the N.S.W. Fruitgrowers' Federation, has just returned from a business trip through the irrigation area. Amongst other matters that engaged the attention of Mr. Such were the position with regard to the canned fruits industry, and the problem created at Griffith by the suspension of operations at the Penfolds' winery.

Mr. G. H. Wilson, who is organising on behalf of the Fruitgrowers' Federation of N.S.W., has done some excellent work of late in the Southern Highlands districts of New South Wales. A special effort is being made to secure the affiliation of local associations with the larger body, with a view to consolidating the organising of growers.

PUBLICITY SCHEME.

The Fruitgrowers' Federation, Central Citrus Association, and Agents' Association are negotiating at present with a view to raising funds which can be used for newspaper and other forms of publicity.

The limited newspaper advertising which has been carried out here of late under the direction of some of the packing houses, has demonstrated clearly what a powerful factor the fruit industry has in wisely directed publicity that aims at educating the public in the health value of fruit-eating. Even those who are sufficiently well appraised of the benefits to be derived from regular consumption of fruit may well stand the reminders that newspaper announcements provide.

Excellent support has already been secured for the proposed advertising campaign, which is based on the making of a levy of, say, ½d. per case from all growers whose support can be secured. Contributions on this basis from growers representing some 500,000 cases have been offered to date, and it is confidently anticipated that the number will reach 750,000 before very long.

CITRUS CROP.

Unusually Clean.

At a time when the citrus growers are faced with a big problem in disposing of the abnormally heavy crop, it is pleasing to know that throughout the State the fruit is remarkably clean and free of disease. This happy condition must undoubtedly be attributed in very large measure to the fact that citrus orchards in the majority of cases were sprayed earlier this year than is usual.

"Spray early," is the watchword of the experienced citrus grower, and, realising that the crop this season promised to prove an exceptionally heavy one, the "spray early" advice was strongly impressed upon growers by the department's experts and by the growers' associations.

Fortunately the general weather conditions which prevailed throughout New South Wales during last January lent themselves particularly well to successful spraying, so that most orchardists were able to benefit by the prophetic warnings of the experts.

A Lesson for the Future.

The result should provide an impressive lesson for the future. Too often growers are apt to postpone the work of spraying until February or even March, when there is really nothing of so much importance as to prevent the job being done during the earlier month. The few extra weeks of immunity from attack give pests and diseases just the chance they need to develop and entrench themselves until it becomes a very difficult matter to combat them.

WYONG (N.S.W.).

Citrus Fruit for Export.

A shipment consisting of 1,000 cases of citrus fruit has been prepared for export by the Wyong Co-operative Packing House. The decision to enter into the export trade was announced recently at the annual meeting of the Society. Some 3,000 cases have been packed for market at that time, this quantity being greater than the average for previous years. The following were elected as a committee:—Messrs. G. W. Bath (Chairman), R. A. Smith, D. A. Gordon, D. Woodbury, and E. H. Braithwaite. Mr. L. F. Cohen was appointed Auditor.

ROYAL SYDNEY SHOW.

Altered Opening Date.

The Council of the Royal Agricultural Society of New South Wales has decided to open the Royal Sydney Show on the Wednesday preceding Easter, instead of on the Monday, as has been customary for some time. The show will be continued then until the following Saturday week, so that it will be in progress for 10 days, as in the past.

The schedule of fruit classes is not yet complete, but it is unlikely that any material changes will be introduced.

Improvements to Ground.

The Council of the R.A.S. has agreed to make available the sum of £4,500 for the purpose of effecting repairs and improvements upon the ground.

Pruning Competitions.

"The Department of Agriculture has acceded to the request of the Council that pruning competitions and certificates for competency in pruning be inaugurated."

NORTHERN SUBURBS (SYDNEY) SHOW.

The Northern Suburbs A. and H. Association will hold its ninth annual show in January, 1929, at St. Ives. The display of fresh and preserved fruits exhibited at shows held under the auspices of this Association is recognised as being amongst the finest to be found at any provincial show in N.S.W. It is held at a time when there is an exceptionally wide variety of fruits, and invariably all classes are well contested, entries coming from the Hills districts, Dural, Galston and even as far as Gosford.

PLANS FOR MARKETING IN N.S.W.

A notable addition to the open-air fruit stores in Sydney is an attractive stall situated on a temporally vacant block of land at the corner of Park and Castlereagh streets, Sydney. This has been arranged by the N.S.W. Fruit Glut Committee. Its accessibility to the public and the presentable manner in which good quality fruit is being offered to fruit consumers, ensure excellent patronage. The stall has quite a good carrying capacity, but its design and situation are such that two salesmen can handle the business in comfort. An effort is being made by the Fruit Glut Committee to secure the use of other vacant blocks in the city, as it is realised that there is scope for a much larger number than is operating at present.

Preserving Oranges.

Hawkesbury College Tests.

Interesting tests which have been carried out recently at the Hawkesbury Agricultural College, Richmond, N.S.W., have proved that the preserving of cut Oranges gives better results than those secured by preserving the fruit whole. Under the latter treatment the flavour has been found to be insipid. The tests carried out prove the following method satisfactory:—

Cut the ripe Oranges into "V"-shaped sections having a width of about ¾in. at the rind; pack the jars with the cut fruit, and fill them with cool strained syrup made up from 5lb. to 6lb. of sugar to each gallon of water. The jars are then placed in cold water, which is brought to a boil and kept boiling for 5 minutes, when the jars are removed.

BLACK APHIS.

Reports from Peach-growing districts indicate that black Peach aphis will be in evidence more than usually this month. In fact, it will not surprise if some districts are subjected to particularly bad infestations both of the black and of the green species of aphis.

Precautions should be taken promptly by growers if loss is to be minimised. Effective treatment depends largely upon the climatic condition ruling in the locality afflicted by these pests, but it will help a good deal if the ground near the trees is kept free of weeds. Lime sulphur, Miscible oil (1 in 25), or Red Oil sprays in districts where the trees are as yet dormant, should prove effective, while in the warmer, more forward districts, nicotine, sulphate, benzole emulsion, or black-leaf 40 is preferable. Repeated spraying may be needed during summer months.

It is interesting to note that the N.S.W. Department of Agriculture is now engaged in making special investigations with the object of ascertaining the most effective means of combating black aphis in Peach and Cherry trees and green Peach aphis.

VALENCIAS.

Big Shipment to U.K.

The Esperance Bay, which is scheduled to leave Sydney on September 8th, is to carry a consignment of 6,000 cases of Valencia Oranges for the United Kingdom.

This shipment will be followed in October, most probably, by a somewhat smaller one.

FAST PACKING.

Exceptionally high tallies were made recently at the Batlow packing house by two of the lads. One of them wrapped and packed 233 cases of large-size Granny Smith Apples in 8¾ hours, while another registered 224 cases for the same time. For 48 hours the respective tallies of the two packers were 1,029 and 1,020 cases, and the total for the week of five packers was 3,981 cases.

SUNKIST JUICE EXTRACTORS.

Introduced in Sydney.

The first "Sunkist" juice extractor to be used in Sydney is now doing service in the Batlow packing shed's fruit store at Reiby-lane, near Circular Quay, Sydney. Undoubtedly it is proving popular with the public, who, now that Sydney's weather is rapidly warming up, will be particularly keen to secure pure fruit drinks.

Canned Fruits Processed During the 1927-28 Season.

According to advices from the Australian Fruit Canners' Association (Secretary, Mr. Jas. L. Moore), the following are the details of the canned fruits processed in Australia during the 1927-28 season:—

Canned Fruits Processed During 1927-28 Season.

(Dozen Tins.)

	Vic.	N.S.W.	S.A.	Tas.	Total.
Apricots—					
Export—Choice 30 oz.	29,129	25,847	—	—	54,976
„ Choice 16 oz.	—	—	—	—	—
„ Standard 30 oz.	25,424	36,161	—	39,081	100,666
„ Standard 16 oz.	7,825	131	—	2,679	10,635
„ New Zealand	110,215	—	—	—	110,215
Local—30 oz.	114,402	20,568	14,104	54,376	203,450
„ 16 oz.	32,697	868	1,428	10,915	45,908
Totals	319,692	83,575	15,532	107,051	525,850
Peaches—					
Export—Choice 30 oz.	4,234	832	—	—	5,066
„ Choice 16 oz.	—	3,906	—	—	3,906
„ Standard 30 oz.	529,779	125,578	—	—	655,357
„ Standard 16 oz.	25,968	18,612	—	—	44,580
„ New Zealand	374,359	—	—	—	374,359
Local—30 oz.	460,712	315,932	34,961	—	811,605
„ 16 oz.	108,019	79,345	3,130	—	190,494
Totals	1,503,071	544,205	38,091	—	2,085,367
Pears—					
Export—Choice 30 oz.	25,191	—	—	—	25,191
„ Choice 16 oz.	—	37	—	—	37
„ Standard 30 oz.	167,538	15,455	14,200	54,288	251,481
„ Standard 16 oz.	25,385	8,952	—	37,998	72,335
„ New Zealand	107,923	—	—	—	107,923
Local—30 oz.	156,330	31,362	110,787	33,655	332,134
„ 16 oz.	51,845	12,997	4,780	3,008	72,630
Totals	534,212	68,803	129,767	128,949	861,731
Apricots	319,692	83,575	15,532	107,051	525,850
Peaches	1,503,071	544,205	38,091	—	2,085,367
Pears	534,212	68,803	129,767	128,949	861,731
Grand totals	2,356,975	696,583	183,390	236,000	3,472,948

Tasmania.

Orchard Notes - Important Conferences of Fruitgrowers

(By Our Special Correspondent)

A VERY MILD WINTER has been experienced. Good rains have fallen throughout the State, and the crops are well forward. Indications point to an early spring—Apricots, Plums and Cherries are already showing signs of sap movement.

Beware Late Frosts.

With an early season, in most districts, there is always a greater risk of injury from late frosts, especially stone fruits, and growers are rather apprehensive of the weather conditions that may be experienced at the flowering and fruit-setting period.

The majority of growers have made good progress with their cultural operations, and the orchards are generally presenting a business-like appearance. Following the heavy yield of this season, the general anticipations are for

light to medium crops

of Apples and Pears, and buyers are already reported to be securing their requirements for 1929 export.

A certain amount of new planting is taking place, many growers supplementing their existing areas with two to five acre extensions, comprising the popular varieties:—"Granny Smith," "Tasma" (Democrat), "Tasman's Pride," and "Cleopatra" being the general choice.

Attention is also being paid to

the canning industry,

several growers in Southern Tasmania planting out fairly large areas of Bartlett Pears and Apricots under contract to the factories. During recent years the supplies of green Gooseberries have been much reduced, owing to many areas going out of cultivation. The increased prices of the last few seasons are directing growers' attention to the production of this fruit, and several fair-sized areas are being established for canning purposes.

Fruit Exports.

Returns from the Sydney and Brisbane markets now show an increase in prices, especially for French Crabs and coloured dessert varieties, and it is expected that regular consignments will go forward until the end of the season (January). The quantities held in cold storage at the end of August would approximate:—

Apples	184,626
Pears	3,582

In addition to these, a certain amount of the later kinds, "Tasma," "Sturmer," and French Crab, are held by growers in their private packing sheds under ordinary storage conditions.

The total quantity of fruit left in the State would be difficult to estimate, but it should not be less than 275,000 bushels of Apples and 5,000 bushels of Pears.

Account sales for consignments forwarded overseas are generally turning out slightly better than the previously cabled reports, but indications point to a very small margin for the season. This, of course, will be largely influenced by the prices obtained for the later boats. Recent reports received state that these are now showing a substantial appreciation, especially at North of England ports and on the Continent.

The total quantities of Apples and Pears exported to date are as follows:—

Overseas	2,804,468 bus.
Interstate	997,364 bus.

TASMANIAN FRUITGROWERS' CONFERENCE.

Reduction of Charges Urged.

The Conference of Tasmanian Fruitgrowers, held at Hobart and Launceston on August 7th and 9th, was opened by the Minister for Agriculture, Sir Walter Lee. Mr. B. J. Pearsall, M.H.A., occupied the chair.

The Minister, in reviewing the fruit position in Tasmania, said the reorganised Department of Agriculture proposed to assist producers in lowering the costs of production.

The annual report and balance-sheet was adopted at both meetings, and many items of interest to the industry generally was discussed, and the following resolutions carried:—

Fruit Advisory Board.

Consideration was given to the election of producers' representatives on the Fruit Advisory Board, and, after a good deal of discussion, resolutions were agreed to by which:—

"The Southern representatives be appointed at the October elections for a period of one year and nine months, the elections being held biennially thereafter."

"The Northern representatives being elected by ballot at the Annual Conferences, as in former years. At the ballot which was held in Launceston, Messrs. Neil Campbell, M.H.A., West Tamar, J. H. Astell, Spreyton, and G. McGowan, Scottsdale, were elected to hold office for the ensuing year."

More Equitable Distribution.

The following motion was carried at both Conferences:—

"That this Conference recommends that the State Fruit Advisory Board make arrangements with the shipping agents for a more equitable distribution of cargoes throughout the United Kingdom during the 1929 export season."

At the Northern Conference, a resolution was also carried:—

"That this Conference urges upon the Fruit Advisory Board the absolute necessity of doing everything possible to widen distribution overseas, and that data be collected as to the approximate quantities the different ports in the United Kingdom and Continent can absorb from all States at a payable price, say, 13/- or 14/- per case, and when information is obtained the Board urge the shipping agents to make a serious attempt to obtain space for such quantities to be shipped direct, always taking into consideration the quantity and destination of fruit from other States and New Zealand."

Reduction of Shipping Charges.

Mr. Campbell (West Tamar) moved:—

"That this Conference of fruitgrowers, for and on behalf of the fruitgrowers of Tasmania, hereby requests the shipping agents to reduce substantially the shipping charge of 3d. per case."

Mr. Campbell said that, although prices remained more or less on the same level, the cost of production was steadily increasing. He wanted growers to acknowledge the ready manner in which the shipping agents met them and discussed the question of charges, and he did not wish the motion to be construed, as an attack on the agents. The fact was clear that the industry was overburdened with charges, and a stock-taking was justified, and, at the same time, urgently required. At the present time the charge per case amounted to a sum in the vicinity of 6/-, made up as follows:—Shipping 3d., insurance 1½d., Advisory Board levy, one-sixteenth of a penny, exchange ¾d., overseas freight 3/6, consolidated charges 1/- to 1/2, commission 6d., and advertising ½d.

Mr. Campbell made the following comparison between gross charges for the past season, and those for a normal season:—

	1928. Season. £	Normal Season. £
Shipping	35,000	17,500
Insurance	17,500	8,750
Exchange	8,750	4,375
Overseas freight	490,000	245,000
Consolidated charges	162,500	81,250
Commission	70,000	35,000
Advertising	5,833	2,916

Other charges besides shipping called for investigation, and would have to be analysed if the present overhead cost was to be reduced. Since framing the motion, he had learned that shipping agents had made a rebate of 10 per cent., for which the growers were grateful; but he considered that representatives of the industry should once more urge the agents to make a substantial reduction. Growers were "up against it," and every penny counted.

Mr. J. H. Astell (Spreyton) seconded, and the resolution was carried by a large majority at both Conferences.

Consolidated Charges.

Mr. Neil Campbell (West Tamar) further moved:—

"That all overseas brokers handling and selling Tasmanian fruit be informed that, in the opinion of this Conference, much unnecessary expenditure is incurred in Tasmania in the way of securing consignments, and that, as this probably represents a substantial portion of the unexplained 'consolidated charges' at the selling end, it is urgently necessary, in the interests of the industry in Tasmania, that all unnecessary expenses and charges be eliminated next season."

The resolution was agreed to at both Conferences.

Organisation of Overseas Export Trade.

Mr. H. R. Robinson (Frankford) moved:—

"That a round-table conference be convened of (a) shipping agents, representative of Waterside Workers, Marine Board officials, and fruitgrowers, with a view to a more careful, expeditious, and economical handling of fruit at ports of export, and where insulated cases are not used to inaugurate an approved system for ventilation between stocks whilst awaiting shipment. (b) Between shipping companies or their agents and fruitgrowers, with a view to bringing about a reduction in port charges and ocean frieghts on fruit overseas and interstate. (c) Between shipping agents, with a view to arriving at a more economical system for arranging space requirements for overseas export."

Mr. A. E. Webb (Launceston) seconded, and the motions were agreed to.

It was agreed:—

"That this Conference request the Federal Government to direct the Development and Migration Commission to inquire into all charges made by fruit shipping agents, and into all commissions given and received by them, and then to pass an Act regulating the relationship between such agents and fruit exporters with respect to all matters."

"That the Advisory Board be requested to arrange for a round-table conference between sawmillers cutting fruit case material, shipping agents, and members of the Advisory Board, with a view to having all case material seasoned before distribution, establishing general uniformity of case as to length, width, and diameter, and insulation if deemed expedient."

"That consideration be given to the necessity of precooling fruit destined for overseas markets, and that the Advisory Board make enquiries into the experiments conducted."

Overseas Representative.

A motion by Mr. E. Reed (Exeter):—

"That this Conference recommends that an overseas representative be appointed to supervise the distribution of fruit on overseas markets, and take any action necessary in fruitgrowers' interests,"

was defeated by a small majority.

TASMANIA FRUIT ADVISORY BOARD.

Annual Report.

In the annual report of the Tasmanian Fruit Advisory Board, which was adopted by Fruitgrowers' Conferences at Hobart and Launceston, it is pointed out that the

organisation is financed

by a levy of one-sixteenth of a penny on fruit exported out of the State, the levy being collected by the overseas exporting agents and the interstate shipping companies.

Defence Fund.

This fund was inaugurated in 1923 by a levy of 1d. per case on oversea exports to defend claims arising through fruit becoming damaged in transit to the U.K. The sum of £5,760 was collected: with accrued interest, less certain expenses, the balance was now £6,679/15/6. The Board had recently instructed the National Fruit Federation to lodge claims against shipping companies in regard to some damaged cargoes.

Fresh Fruits Overseas Marketing Act.

The Hon. T. Patterson, M.H.R., Minister for Markets, visited Tasmania in support of the Export Control Board, but the industry did not support the proposals, each exporting State with the exception of Western Australia expressing a majority vote against the introduction of the Act.

There is need for improved organisation to develop the overseas markets in order that the grower obtain the best results for his labour.

Representation on Overseas Markets.

The Board affirmed the principle of sending a representative abroad to report on the methods for improving export markets.

Advertising Overseas.

Under the present scheme, a levy of a halfpenny per case is collected from the exporter, which is supplemented by a like amount by the broker, and the total is further subsidised on the pound for pound basis by the Commonwealth Government. As Tasmanian interests were apparently submerged, enquiries were being made to have more attention directed to Tasmanian products.

Associated Selected Agents.

During the season the Board has been kept in constant touch with the conditions of marketing Tasmanian fruit in the various States. They have been assisted materially by the Committee of Agents, who, in spite of adverse conditions, have endeavoured by cables and advice to minimise glutted markets.

Standard Purchase Form for F.O.B. Sales.

With the desire for obtaining uniform conditions for the purchase of fruit for overseas shipment, the Board at the request of a Committee of Brokers' Agents, examined a standard purchase form that was considered would be acceptable to producers and buyers.

This was reviewed by the Board's solicitors, who suggested certain amendments, and the form will be available for use in contract sales in future seasons.

Shipping Immature Fruit.

Consternation was caused by a proclamation issued from the Department of Markets with respect to the shipping of immature fruit. This was accentuated by the forward season necessitating the shipment of many kinds at an earlier period than in normal years. A deputation arranged by members secured a modification of the proclamation.

Inspection of Fruit for Export.

Representation made to the Commonwealth Government to bring inspection under State supervision was not successful, and Tasmania now remains the only State where it is necessary to employ two sets of inspectors to supervise uniform regulations for export.

Bounty on Dried Apples.

Representations for a bounty to be provided by the Commonwealth Government on dried Apples exported overseas, were not successful. Further efforts will be made in this direction.

Berry Fruit Exports.

At the request of the Development and Migration Commission, consideration was given to a scheme for the inauguration of a trade in berry fruits with the mainland. An experimental shipment of Strawberries to Sydney proved unsatisfactory. The scheme, however, will be further tested with further shipments of Black Currants and Strawberries to Sydney and Melbourne.

Developing Home Markets.

Owing to abnormal crops, arrangements were made with the railways to receive orders for fruit, and distributors were appointed. Attractive posters were displayed in non-fruitgrowing districts, but the response was not satisfactory.

Branding of Cases.

An intimation from Department of Markets that the brand "Australia" was not to be placed on the lids of cases for overseas export, is receiving attention, and strong representations were made against any alteration, as the brand on the end of the case would cause congestion.

THE TEXAS COMPANY.

Still Extending.

It was recently announced that the Texas Company, by the acquisition of a controlling interest in the California Petroleum Company, had largely increased the already wide scope and efficiency of Texaco products.

Now comes the news that the Texas Company, to-day the leading free and independent oil-producing company of the world, has by the purchase of the West Texas properties of the Landreth Production Company for 6,500,000 dollars (£1,340,200), added still further to their resources.

The producing property taken over includes the so-called Landreth strip of 182.8 acres, on which there are 18 wells, producing about 7,500 barrels daily. Among other properties included in the deal are thirty-one 55,000 barrel tanks situated on the Landreth strip.

Victoria

Crop Prospects ∴ News and Notes.

Apple trees show promise of a good crop. The buds of the leading commercial varieties are plump, but apparently strong, healthy buds in some seasons have an inherent weakness, and fail to set fruit.

Thus writes the Victorian Horticultural Superintendent, Mr. J. M. Ward, in his seasonal report for August 1st. Continuing, the report states:—

After last season's exhausting crop, only a medium crop of Apples is expected, despite heavy bud development.

Pear buds are not developing as well as expected in the winter, and a medium crop is expected.

Early Peaches in the Goulburn Valley appear to be light. The chief canning varieties, however, promise a fair crop. Midseason freestone Peaches show well for a medium to good crop.

Apricots, after two years' heavy bearing, are only carrying a moderate number of healthy buds.

In the southern districts, the Peach crop should be good, and oil spraying to control aphides is now in full swing.

On the whole, the deciduous fruit crop should be medium to good.

The Passion-fruit crop is not as heavy as expected earlier, but vines are healthy, having escaped frost damage up to date. At the present time Victoria has over 1,000,000 cases of Apples in cool stores.

VITICULTURE.

Early Ploughing Desirable: Vine Swabbing.

The winter has been an ideal one; enough rain to maintain soil moisture, but not enough to interfere with vineyard work, which is generally well forward—pruning especially so; ploughing rather less—there is a regrettable tendency in some quarters to unduly delay the first ploughing, which it is very desirable to execute early and to a good depth.

Severe frosts have been frequent during the month, but at this time of the year they are more beneficial than otherwise. Though the power often attributed to them, of destroying pests, may be purely imaginary, their mellowing action on recently ploughed land is very real. On the whole, the winter is a far more favourable one than that of 1927, which was unduly dry.

The winter swabbing against vine black spot will soon need attention. The fungus was a good deal in evidence last autumn, and a wet spring would bring much fungus development. Preventive swabbing cannot be too strongly advised.

Citrus.

Citrus fruits are now being marketed from all parts of the State. Navel and common Oranges generally are of good pulp quality. Frost damage has occurred in several localities to Mandarins. The Lemon crop is heavy, but good inquiry by the trade is maintaining good prices. Groves generally are looking well.

VICTORIAN FRUIT MARKETING ASSOCIATION.

Successful Meetings.

At the request of prominent orchardists, the provisional Chairman and Secretary of the Victorian Fruit Marketing Association addressed a meeting of Apple and Pear growers at Somerville on 25th July, to explain in detail the objectives of the organisation.

Some 40 growers attended. All present unanimously agreed that the movement initiated was long overdue, and that it was the duty of all connected with the Apple and Pear industry to join the organisation.

It is stated that the growers' response to date has been most gratifying to the initial organisers of the scheme. The applications for membership, received and in prospect, already number several hundred.

On 7th August the provisional Chairman, Mr. H. G. Colombie, and the provisional Secretary, Mr. A. S. Harrison (I.F.M. Co.), addressed a meeting at Pakenham, which was well attended by growers of the district, under the chairmanship of Mr. J. J. Ahern, and when the working details of the organisation were explained. Mr. Thomas and Mr. Bailey also went into various phases of the organisation, and Mr. Cave, of F. Cave and Co., gave additional information.

Numerous questions were asked by growers during the meeting, and answered by Mr. Colombie. At the close of the meeting, some 40 growers joined the organisation.

Cold Storage In Australasia

Fruitgrowers' Cool Stores Association.

Big Conference at Harcourt Of Viral Importance to all Orchardists.

Advertising Campaign Agreed To.

(By Our Special Representative.)

THERE was a big gathering of delegates at the 10th annual conference of the Fruitgrowers' Cool Stores Association at Harcourt on Wednesday, August 15th. Among the visitors were representatives from South Australia and New South Wales, and the Parliamentary representatives of the Bendigo district—Messrs. H. Lawson, M.L.A., G. Hurry, M.H.R., G. V. Lansell, M.L.C., and H. Keck, M.L.C. After inspecting the Harcourt cool stores, the party were entertained at luncheon by the directors. Mr. J. H. Lang presided, and extended a hearty welcome to the visitors. About 120 sat down to luncheon.

The delegates present were:—Messrs. J. D. Simpson (Ardmona), C. Smith (Batlow, N.S.W.); W. Moore, J. Stevens, G. C. Karnaghan (Blackburn), W. Mock, C. Fankhauser (Burwood E.), H. L. Tomkins, H. Chandler (Croydon), R. Finlay, R. J. Lorimer, W. J. Miller (Diamond Creek), J. J. Tully, R. Petty (Doncaster Central), J. Robinson, G. Knee, W. Johnston (Doncaster East), A. F. Tully, H. Petty, W. J. Whitton (Doncaster West), J. H. Lang, E. Pritchard, E. Eagle, A. Frankling, H. McLean (Harcourt), J. D. Carpenter, F. Unthank (Hastings), J. Pepperell, D. Peck (Mount Waverley), J. W. Bailey (Narre Warren), A. Thiele, F. Petty, E. Sutherland, G. Grover (orchardists), T. E. Butler (Pakenham, Somerville and Red Hill), H. Pump, J. W. Barrett, W. McKinlay, F. C. Pyke, A. J. Tann, J. G. Aird (Ringwood), H. Hawken (Somerville), R. Read, R. Hillhouse, D. Nightingale (Templestowe), L. G. Cole, F. Stockton, H. Willoughby, G. Webb, T. Shepherd (Tyabb), H. Gosbell, T. Gosbell, C. Wallace, F. J. Byrne (Wantirna), W. Lipscombe, D. Lipscombe, — Watson, C. Griffith (private stores), Fletcher James (Cudlee Creek, S.A.). Others present were Messrs. J. M. Ward, Superintendent of Horticulture; J. Hepburn, Victoria Dock Cool Stores; J. W. Aspinall, Metropolitan Fruitgrowers; L. C. Macarthur, Electricity Commission; W. E. James, Harcourt.

The Luncheon.

Mr. J. Tully, President of the Association, in proposing the toast of Parliament, said that growers had received great assistance from the State Governments during the past 15 years, and the passing of the Fruit Bill, under which money had been made available for building many of the cool stores, was a boon.

Mr. G. Hurry, M.H.R., responded on behalf of the Federal Government, and Messrs. H. Keck, M.L.C., and H. Lawson, M.L.A., on behalf of the State Government. The toast of the visitors, proposed by Mr. E. Pritchard, was responded to by Messrs. J. M. Ward, J. Hepburn, and Fletcher James. Mr. James said South Australia had 15 cool stores; nine were in fruit areas, six in Adelaide and Port Adelaide. Four years ago it was decided to form an Association, which comprised seven districts. They packed to a uniform standard, and had their own inspector to keep the grades even. They shipped to England under the one brand in the Canadian case, and the overseas buyer had no difficulty in securing 1,000 cases of identical quality from any part of the shipment. Over half a million cases had been exported from South Australia this season.

Mr. Lawson, M.L.A., gave an interesting address.

The Conference.

In declaring the Conference open, Mr. H. Lawson, M.L.A., urged the value of the home markets, and congratulated the Railways Department on its success in advertising fruit

The President, Mr. Tully, moved that the annual report and balance-sheet (published in the last issue of the "Fruit World"), which showed a credit balance of £72, be adopted, and stressed the fact that while storage space in the various stores was overtaxed, fruitgrowers were penalised by low prices, and were worse off financially than if only a light crop had been harvested. (Carried.)

Mr. Tully noted the fact that several delegates were absent through illness or family troubles, and it was resolved that letters of sympathy be sent them, including one to Mr. W. H. Everard, M.L.A.

Cool Store Balance-sheet.

Mr. J. W. Barrett (Ringwood) presented a graph dealing with the comparative working costs of cool stores, balance-sheets, etc., and was cordially thanked for his paper on "Fruit Cool Store Balance-sheets."

"Fruit World"—Official Organ.

Mr. J. G. Aird outlined a proposal from the "Fruit World," agreeing to publish the Conference proceedings in one issue, and to make it available to the members at a reduced rate, which could be ordered in bulk from the various cool stores directorates, and that the Association make the "Fruit World" its official organ.

On the motion of Messrs. Lipscombe (Croydon) and Lang (Harcourt), it was decided that the offer of the "Fruit World" be accepted, and that this paper be made the official organ.

Advertising Campaign.

Mr. Aird, in drawing attention to the necessity for an advertising campaign to dispose of surplus fruit, said there were 1,000,000 cases of fruit in cool store, necessitating the sale of between 50,000 and 60,000 cases weekly till the end of the present season. A Conference convened by the Superintendent of Horticulture had met, being attended by representatives of the Agricultural and Railway Departments, fruitgrowers, wholesalers, and retailers, and a programme had been drawn up (see details elsewhere in this issue). A contribution of 10/- per 1,000 case space would yield £500 for putting the scheme into operation.

The suggestion was commended by Messrs. J. M. Ward, Superintendent of Horticulture; H. Keck, M.L.C.; C. Smith (Batlow, N.S.W.), J. H. Lang (Harcourt), J. Stevens (Blackburn), and others, and on being put to the meeting, was carried by a large majority.

Extending Activities.

On the motion of Messrs. L. G. Cole (Tyabb) and H. S. Willoughby

(Tyabb), it was resolved that the activities of the Association be extended to embrace administrative work in connection with the fruit industry, as it concerned those fruits grown by its members.

The resolution was adopted, and a sub-committee consisting of Messrs. R. M. Finlay (Diamond Creek), W. Mock (Burwood East), J. Stevens (Blackburn), J. H. Lang (Harcourt), L. G. Cole (Tyabb), W. Lipscombe (Croydon), J. Carpenter (Hastings), E. Pritchard (Harcourt), A. Thiele (Doncaster), J. W. Barrett (Ringwood), H. R. Chandler (Croydon), and the Secretary were appointed to frame a tentative constitution and report to the quarterly meeting of the Association.

Election of Officers.

The following office-bearers were elected for the coming twelve months: Mr. W. Mock (Burwood East), President; Mr. J. Stevens (Blackburn), Vice-President; council member to the Chamber of Agriculture, Mr. J. H. Lang (Harcourt); delegate to metropolitan section of fruitgrowers, Mr. J. G. Aird (Ringwood); Secretary and Treasurer, Mr. J. G. Aird.

Hailstone Insurance.

Mr. J. D. Simpson (Ardmona) referred to the good arrangements that had been made by soft-fruit growers in connection with hailstone insurance. He considered it was a sound investment on a basis of 3 per cent.

Pear Shipments.

On the question of Pear shipments, Mr. J. H. Lang (Harcourt) moved that the Metropolitan Association be asked to accept two delegates from the Cool Stores' Association to act in conjunction with them.

Mr. W. E. James (Harcourt) said the motion had emanated from the Harcourt cool store, because of the fact that thousands of cases of Pears from the Harcourt district had opened up so badly at overseas ports, that they were worthless, and growers had received large deficit notes. Fruit shipped on the Esperance Bay from the same growers had opened up well, and sold at 26/- per case, proving that Pears arriving in good condition found a ready market. Shipments were unsatisfactory. Mr. Colombie had a bad time the previous night, at Harcourt, while endeavouring to organise growers with regard to shipments. Some growers said the agents were parasites, but he knew that there were many good agents, men who had done business with growers for years on a satisfactory basis. Some effort should be made to get shippers, agents, and companies together to prevent the losses of 1927-28. The Export Handling Committee had fought hard to secure suitable boats for the carriage of Pears, but were unable to do so because good boats had been diverted to the New Zealand trade.

The Chairman: A Committee was appointed to confer on the matter of shipments, and they would be glad to have assistance of the representatives from Harcourt. The Executive want supervision over shipments leaving Australia. He (the Chairman) had always received good prices for any Pears shipped to England. He had received double the price in England than he had in Australia. As a matter of fact, continued Mr. Tully, Australian growers had done so well out of Pears arriving in good condition, that they had got careless on the question of shipping.

Mr. J. H. Lang said it seemed rather amusing to think that they were still experimenting after 17 years of export. He had never faced any serious losses, but thought there should be two delegates from Harcourt to act on the Pear Shipment Committee, in order to investigate overseas shipments.

The motion was carried, and Messrs. J. H. Lang and W. E. James were appointed to act with the Metropolitan Committee.

This concluded the afternoon session, and at 5.30 p.m. the Conference adjourned until 7 p.m.

Self-Registering Thermometers.

On the motion of Doncaster West, it was unanimously resolved to again make representations to the Federal Government to carry out experiments with regard to the installation of self-registering thermometers on overseas fruit-carrying steamers.

Australian Conference.

On the motion of Mr. C. Smith (Batlow, N.S.W.), seconded by Mr. J. H. Lang (Harcourt), it was decided:—"That this Association favours the calling of an Australian Conference of Apple and Pear growers for the purpose of:—(1) Reviewing the grading regulations. (2) Discussing the adoption of a standard case, both for export and domestic use. (3) Discussing the advisability of a small levy on all fruit exported to provide finance for an Australian Apple and Pear Growers' Association."

Batlow also moved—"That each cool store affiliated with the Association be asked for a list of the varieties stored, and how each variety stands up under cool store conditions and from this data a summary be made and distributed to members." (Carried.)

Pre-cooled Apples for Export.

On the motion of Messrs. Lang (Harcourt) and Lorimer (Diamond Creek) it was decided to appoint a Committee to go into the question of the possibility of arranging a trial shipment of pre-cooled Apples for export to the United Kingdom and the Continent on a commercial basis during the coming season. Messrs. J. W. Bailey (Narre Warren), W. Lipscombe (Croydon East) and J. G. Aird (Ringwood) were appointed.

Mr. J. G. Aird said that space would be available at the Government Cool Stores for those who had no cool store space, and were desirous of joining in the trial shipment. He asked growers to give some idea of the number of cases they would supply.

Electric Installation.

There was a lengthy discussion between Mr. T. E. Butler, Secretary of the Somerville Cool Stores, and Mr. L. C. Macarthur, Electricity Commission, on the subject of the running costs in electric installation.

Mr. Butler criticised the Electricity Commission's estimates when Somerville decided to convert to electric power. The increase over the estimate, he said, would involve his Association in from £65 to £100 this season. He advised all stores who were considering the installation of electricity to seek the advice of a consulting engineer before doing so. At the next convention they would have a contrast in the working costs of suction gas and crude oil costs.

Mr. Macarthur contended that Mr. Butler's method of basing his estimates was wrong, and that the estimates could only be made by a qualified engineer. It was a difficult matter, he contended, to make an accurate estimate with regard to fruit.

Mr. Chandler (Croydon), said that crude oil has been found to be cheapest in some cases than electric power. It was the business of the grower to find out and use the cheapest method.

Messrs. Butler and Macarthur's papers on the subject appear in another column.

It was agreed that reports by Secretaries of affiliated stores, in accordance with the resolution passed at last conference, viz.:—"That the Secretary of each store, after consultation with the engineer, report each year to the annual conference the results of any experimental work carried out at the store, or any matter connected with the storage of fruit likely to be of value to members of the Fruitgrowers' Cool Stores' Association of Victoria."

This concluded the evening session, and the Conference, after passing a vote of thanks to Messrs. Butler,

Macarthur, and Lang, went into Committee. Many delegates were accommodated at the homes of Harcourt growers for the night, but the majority left by car on their return to their various destinations. Those who remained at Harcourt spent the following day sightseeing in the hills and visiting the numerous orchards that have been the chief source of revenue to the district.

Cool Storage Management.

Economy and Efficiency.

A paper read by Mr. J. H. Lang (Harcourt) before the Fruitgrowers' Cool Store Conference.

IN giving a few details regarding economy and efficiency in working a cool store, I do not claim that I have any original information to place before this conference. What I have to say is the result of experience and observation of myself and others, the greater portion of which is already known to the members.

In the first place the two objects to be attained are not at all antagonistic, it is not economy to save money in working at the expense of efficiency, and on the other hand any suggested improvement to increase the efficiency must be carefully examined to see that the result will be worth the expense involved.

In storing fruit and working a cool store, the first essential is an adequate supply of horse sense, and horse sense is said to be the product of stable thinking. Again, it is not so much doing one thing well, and attention to a large number of details, as some of us found out in our courting days, "It's the little things that tell."

Where does the responsibility of running a cool store, to the best advantage, rest? With the management or the shareholders storing the fruit? My answer to that is—With both.

It is the duty of the management to see that all machining, etc., is giving the best possible service at the lowest possible cost, and that the store is fitted with all the necessary appliances that make for efficiency without unduly loading the debit side of the ledger.

There are many ways in which the shareholder can help to reduce the running expenses.

Private stores have a big advantage over the co-operative.

The co-operative spirit

is not so marked in some shareholders as it should be, and as they fail to see any immediate gain to themselves, very often neglect the little precautions apparently trivial in themselves, but which in the aggregate, considerably increase the running cost.

The principal duty of the management is to maintain temperatures, and in this department considerable assistance can be given by the storer of the fruit. Every heat unit brought into the cool chamber must be taken out again by means of the refrigerating machinery. It therefore follows that the fewer heat units allowed to enter, the shorter will be the running time of the machinery, with the consequent saving in fuel, lubricants, etc.

Heat may enter the cool chambers:

(a) With the fruit;

(b) Through the open door;

(c) Percolating through the walls.

The first two of these are directly controllable by the shareholders, and the last in a well insulated store, is very limited.

It follows then that the cooler the fruit is when it is put in the chamber, the shorter the time necessary to reduce to the storage temperature, therefore it is advisable to

limit the hours

when fruit is received, as far as possible, due regard being paid to the convenience of the shareholder.

The best time is, of course, in the morning, after the picked fruit has had the night in which to cool down. Fruit picked for storage the same day should be kept in the shade of the tree until the load is ready for carting. As it is impractical to follow the shade round with the fruit, the shady side on the hottest part of the day, namely the south-east side of the tree should be selected.

When the door of the cool chamber is open, there is a rapid interchange of air, the cool air rushing out on the lower portion of the opening, and the warmer air passing in at the top. This can easily be tested by holding a sheet of paper at the top, and then at the bottom of the opening, therefore the doors should be open for the shortest possible time. The ordinary traffic in and out is advantageous for ventilation purposes.

Regarding the behaviour of the fruit in store, much depends on its previous treatment.

Fruit does not improve in cool storage, the function of the low temperature being merely to retard the usual life processes of the fruit.

Good fruit put in will usually come out good, but inferior fruit will not come out better than when it went in.

When space permits it is advisable to spread the fruit out, well spaced and not more than three or four high, to allow of thorough cooling prior to stacking. When stacking facilities should be made for a

free circulation of air

into each case, this can be done by means of laths between the various layers of cases. Strips nailed on the ends of the cases or by stacking the cases so that one does not rest directly on the one below.

These precautions are much more essential with Pears than with Apples.

Pears in Cold Storage.

With Pears, particularly, it is most important that there be no marked increase in temperature. Once a Pear starts to ripen, low temperatures are of no effect, the ripening process generates heat, and so the vicious circle goes on, until the whole stack is useless for marketing. The engineer is often warned by rising temperatures, that Pears are ripening in a particular chamber.

In air circulation stores, Pears should be placed as far as possible near the inlet ducts, so that they will get the air cool, and not after it has increased in temperature, after passing over other fruit. For the same reason the stack should always be started at this point, as then the fruit once cooled is not subjected to the danger of rising temperatures caused by fresh fruit stored nearer the inlet ducts.

Warm fruit

of any description should not on any account be placed in close proximity to Pears.

When the facilities are available I would always advocate storing Apples and Pears in separate chambers, but this is generally impractical in co-operative stores. Where proper precautions are taken, however, good results should be obtained with mixed storage.

Diseases in Old Cases.

It is customary for many growers to store fruit in petrol cases, which are used for this purpose year after year. The same cases are often used as containers for refuse fruit. The re-

sult is that decay germs accumulate in the cases, ever ready to attack the fruit. Where new cases have to be purchased to market the fruit, it would probably pay to store in new cases. Where this is not done, the cases might, with advantage, be disinfected. Perhaps the easiest way to do this would be to stack the cases on their sides, with all openings one way, and spray with Bordeaux, or they could be fumigated in the cool chambers. Metal containers could, with advantage, be used for all waste fruit, the cost of metal containers is not excessive, and with reasonable care should last several years.

Diseases of Fruit in Store.

These consist of the various rot fungi, spores of which may be carried over in the boxes.

Scald, which can be controlled by use of oiled wrappers or by delayed storage.

Soft Scald.—This is the most serious of all store diseases, and up to the present, very little is known of its cause or prevention. Some lines of Jonathans at Harcourt suffered severely. The disease appeared to be worse near the gangways, and with late picked and stored fruit.

It is only by the closest observation of the conditions pertaining, not only in the store itself, but in the orchard, and in transport, that information can be obtained that will lead to the solution of some of the problems that confront growers at the present time.

The Temperature Factor in Cool Storage.

Thermometers Discussed—Need for Suitable Self-recording Thermometer—Stacking and Cooling—Are Certain Positions in Stores Unsatisfactory—Research Work Advocated.

A paper read before the Fruitgrowers' Cool Stores' Conference by S. Hepburn, Chief Engineer and Manager, Government Cool Store, Victoria Dock, Melbourne.

OWING to the many products now treated by refrigeration, and having regard to the wide range of temperatures employed, means for ascertaining and maintaining those temperatures have become of increasing importance.

It might be well from this point to consider the action of heat. It can be transferred from one substance to another having a colder temperature, and resembles water in this respect, that it will only flow in a downward direction.

Heat is measured in units, and the standard unit of heat measurement is the British Thermal unio, or B.T.U., and is the amount of heat necessary to raise one pound of water from 63 deg. F. to 64 deg. F.

The melting point of ice is 32 deg. F., and the boiling point of water (under normal atmospheric pressure) is 212 deg. F., which gives a scale of 180 deg. between those points, and forms the basis for the calibration of thermometer scales.

This brings us now to the

instruments in use

to-day for the measurement of temperature, and two methods are in common use, one the thermometer, which takes the form of a glass tube, containing mercury, spirit, etc., and the other, the electrical instrument, popularly named the long-distance thermometer.

To take the first, it is recognised in these days of accurate temperatures, that it possesses several disabilities. To meet requirements in refrigeration, it must be of robust make, accurate in measurement, and reasonable in price. These qualities, in present-day instruments, are difficult to obtain.

Many instruments are on the market, which are most difficult to decipher, this being particularly so when mercury is used as a medium, with no dark background.

Where the scale is marked on the wooden frame of an instrument, it sometimes happens that the glass tube becomes loose, and is free to move up and down, thereby giving a false reading, and when this class of instrument is used in a brine tank or battery tank, the scale quickly becomes obliterated.

When in a fixed position, the accurate reading of the instrument is largely dependent on the height of the observer.

Probably in the storage or freezing chamber, the greatest disability of this class of instrument is noticed.

The desired temperature of a chamber is the

mean average temperature,

and to obtain this, a certain position is necessary for the thermometer. This is generally about midway between the ceiling and floor, and about centrally situated otherwise.

It is often found, however, that this does not always give the best results, and a lot depends on the shape of the chamber and the method of introducing the air, or, as in a direct expansion chamber, the position of the coils, and direction of circulation.

This being so, the method of plugging through the wall, and projecting into the chamber, would not appear to give the desired result.

Obviously, to get the

most accurate reading,

the thermometer requires to be hung in the chamber, and this necessitates the opening of the door each time it is desired to observe the temperature.

This brings in two factors, the need of someone to open the chamber and read the instrument, and, secondly, the disturbance to the conditions in the chamber itself.

Both are undesirable, and should be eliminated where possible.

To come now to

the electrical method

of measurement, it is found this possesses many advantages in cold storage work.

Briefly described, a platinum coil takes the place of the thermometer in the chambers, and, according to a well-known law, the resistance of a platinum wire to the passage of an electric current, varies with the temperature.

This variation in resistance is calibrated in degrees temperature, and is read directly from an instrument situated in the compressor room, or other convenient place. It is thus possible to obtain the temperature of chambers at any time, without opening doors, and under conditions which are much more favourable to accurate readings.

In addition, necessary adjustments can be made much more rapidly, and the desired temperature more uniformly maintained.

Coming now to the chambers, I think it might be said, we are still going to school as far as they are concerned.

New problems keep cropping up. Speaking broadly, there is a temperature for all products, treated by refrigeration, at which practically all action ceases and a state of preservation prevails. It is the function of the cool store to approach that temperature as closely as it may, and as rapidly as it can.

It is generally recognised that

rapid cooling is essential,

and probably more so in regard to fruit. The rate of cooling, however, in regard to fruit is a matter requiring close attention, and is, to some extent, controlled by local conditions and methods of application. It is obvious that air at too low a temperature, impinging on the fruit, must have a bad effect.

General practice indicates that systems which introduce the cool air practically all over the chamber, as with the Madison Cooper ceiling, gives the best result in regard to fruit.

The natural law is well known, that cold air being heavier than air of a higher temperature, will tend to fall

and displace the warmer air, but it should not be overlooked that many obstacles are placed in the way of this law operating in cold storage.

Pay Attention to Stacking.

Air, in common with many other agents, is quick to take the line of least resistance, and particular attention to the stacking of a chamber should be given, with the object of assisting the circulation and speeding up the rate of cooling.

It has been found that wide passages, running from end to end of the chamber, provide an easy track for the cool air, which does not then come into intimate contact with the chamber contents.

Further, close packing up to one inch does not provide for rapid cooling, and, where possible, and the cost is not prohibitive, the best results are obtained by cooling down in open order, when stacking can then be done as close as desired.

The tendencies and habits of refrigerated air in cold stores are subjects which are well worth attention, and some thought in this direction would solve many problems.

As an example, I might cite the following:—

We will assume a lay-out of four chambers, one, two, three, and four, and that a battery serving those chambers is built on to No. 4.

Consider 1 and 2 chambers as loaded and cooled down to 33 deg., and that No. 3 chamber is then loaded, and is at a temperature of, say, 50 deg.

It will be found that if the ducts on Nos. 1 and 2 chambers are left open, or partly open, No. 3 chamber will only drop in temperature very slowly.

What is taking place?

The delivery or cool air from the battery is passing along the duct, and following the line of least resistance, proceeds in a straight path, till it can go no further, and then passes through chambers 1 and 2.

Keeping in mind the temperature of those chambers as 33 deg., the returning air, which might be about, say, 35 deg., travels along the return duct to the battery, and in doing so passes over the ports of No. 3 chamber, and acts somewhat like a blanket, tending to

imprison the higher temperature

air in that chamber. It will be appreciated that running under those conditions, time is lost, and the rate of cooling must be slow.

To relieve this condition, and to speed up the cooling rate, it is necessary to close the ports in the lower temperature chamber or chambers completely, until the temperatures in all chambers have become nearly equal, when it will be found satisfactory conditions will obtain if the chambers are then operated in common.

The actual flow, speed, and distribution of air in chambers are matters for consideration in each individual works, and is well worth the time spent on it.

It should be kept in mind that the easier its path is made, the more efficient will be its work. No obstructions should be permitted in the air trunks, as those will have a baffling effect, tending to squeeze the moisture from the air, which will then be deposited in the trunks.

It is undesirable to have moisture in this part of the building.

What Positions Are Unsatisfactory?

Much is made of the assumption that certain positions in chambers, as, along a certain wall, the top tier, the bottom tiers, close to the return ports, etc., give unsatisfactory results, and each season those hardy annuals bob up.

Much of this, I have found, is somewhat exaggerated; in some cases, however, there may be justification for the assumption, but in no case is there justification for lack of investigation to remedy the trouble, if possible.

It is doubtful if anyone can give a reliable opinion of the condition of fruit stacked in a cool chamber from observation of the rows which are showing.

Research Work Needed.

It is not until the stacks have been broken down that the relative condition of the fruit can be ascertained. Should it be found that a part of a chamber is unsatisfactory, possible defects should be looked for, and the following suggest themselves:—

Temperature, circulation, the condition of the insulation at that particular part; it may be wet, or have settled, and might require adding to.

The matter of humidity in comparison with other parts of the chamber could be ascertained.

Referring to the earlier part of this paper, it was pointed out heat would flow from one substance to another, having a lower temperature, and it can be readily understood, in the case of a wall with defective insulation, the rate of exchange might be high, more especially where shutting down is resorted to, and in the case of long-stored fruit deterioration must take place.

In reply to questions, Mr. Hepburn said "brown heart" also existed outside of cool storage. It could be produced anywhere where the gas accumulated. He considered the question of scald should be taken up and investigated thoroughly.

APPLE ADVERTISING CAMPAIGN.

Cool Stores' Association Active.

IN accordance with the resolution carried at Harcourt Conference, when every store represented promised to contribute 10/- per 1,000 case space of their store's capacity towards an advertising fund, to endeavor to increase the demand for fruit now held in cool store. The Secretary of the Fruitgrowers' Cool Store Association (Mr. J. G. Aird), advises that the Apple Campaign Committee met on August 17, when it was decided:—

1. To start the campaign on August 27 next, with a Shop Window Competition in Melbourne and suburbs.
2. The Victorian Railways are putting in hand immediately, calico signs, to be displayed prominently at Flinders and Spencer Street stations.
3. 200,000 recipe cards have been put in hand.
4. Posters for display on railway stations in hand.
5. Commencing August 27, 3LO will broadcast conditions of competition for Limerick Prize, £2/2/-.
6. Arrangements being made for short article on value of fruit in School Papers.
7. Arrangements being made for public demonstrations at the School of Domestic Economy.
8. Better Farming Train will feature in its cookery demonstrations the various ways of using Apples.
9. Prizes to be offered through the Education Department throughout Victoria for the best essay on Apples, etc.

Special fruit trucks for sale of fruit at railway stations in case lots can be arranged should affiliated stores desire it. Each store would make its own selling arrangements ex truck. To avoid overlapping, Cool Stores' Associations are asked to notify if they desire to prospect any particular line in any given week.

Shepparton Fresh Fruits Limited, which has a packing shed in the local railway yards, have offered to act as a distributing depot for fruit at ninepence per case. The Apple Campaign Committee is not interfering with direct sales in any way. Those interested in the proposal of Shepparton Fresh Fruits Ltd., should communicate direct with the Manager, P.O. Box 75, Shepparton.

Fruit Cool Stores Balance-Sheets.

A paper read at the Fruitgrowers' Cool Stores Conference by J. W. Barrett.

A balance-sheet is a statement in abstract form of the debit and credit balances of a ledger kept on the double entry principle, after such balances as should be transferred to the working account or profit and loss account have been eliminated.

In other words, a balance-sheet is a statement of what a business owes and earns. It is necessary to realise that the company is one entity, the shareholders collectively another, and that in consequence the latter appear as creditors of the company with which their money is invested, whether in the form of contributed capital or of accumulated revenue surplus.

In the case of a fruit cool store, the assets may be divided into two classes:—

1. FIXED ASSETS. Those of a permanent nature, by means of which the business is carried on, and which it is not intended to convert into money in the ordinary course of business (e.g., buildings and plant); and

2. FLOATING ASSETS. Those which are used in or are incidental to the conduct of the business (e.g., stock of fuel and stores, levies outstanding and unexpired insurance).

Now, it is only in regard to the second class—the floating assets—that an attempt is made to represent in the balance-sheet their present value in money. Of the first-mentioned class—the fixed assets—the present money values are not intended to be expressed, the prime object being to show how much of the capital of the concern is invested in or represented by such assets. To estimate the present value of such assets would be of little use to the company, and of interest only to a secured creditor, as there is no intention to realise them.

Therefore, the cost—and not the intrinsic money value—is the correct basis for stating fixed assets in a balance-sheet. In practice, however, the question of depreciation has to be considered, and here a portion of the respective assets is charged against the surplus for the period under review and the cost of such assets shown, less that amount which it is considered necessary as the provision for depreciation. Yet this principle is not necessarily observed in respect of all fixed assets.

The balance-sheet of a cool store should be quite easy to follow, the particulars requiring no elaboration. On the "Liabilities" side, the first item shows the Nominal or Authorised Capital of the Store (i.e., the amount of Capital with which a Company is registered and is authorised by its regulations to issue): followed by particulars of the Paid-up Capital, which show the actual amount paid up by the Shareholders on their Shares, from which is deducted the aggregate of Calls outstanding.

Particulars of money owed to Creditors follow (i.e., State Treasurer, Bank, Merchants for supplies, and any Working Levies received in advance).

On this side, too, we show any depreciation Reserve or Sinking Fund. An account of this nature in a Cool Store Balance-sheet arises from the conditions under which, at its inception, the cost of the Cool Store was financed. In the case of a loan having been obtained from the State Treasurer or Savings Bank, the Sinking Fund instalments are in some cases recovered from Shareholders as part of their annual Working Levy, and which, being Capital expenditure, are not strictly debitable to Working Account. Consequently there is always a surplus in Working Account, which is not represented by the equivalent of Cash in the Bank, but is really to be found in the increased equity in the property.

This helpful article is worth close study by every orchardist. The principles underlying the article are applicable to every commercial enterprise, district packing house, dehydrator, or the fruitgrower's own business.

Every primary producer should include an adequate book-keeping system as an essential part of his occupation.—Editor, "F.W."

The ideal method of dealing with the annual Surplus that arises from Loan repayment instalments, is to credit Sinking Fund with such instalments paid during the year. The balance of Sinking Fund plus the amount outstanding on the Loan will then aggregate the original amount of the Loan.

At the end of the Loan period, the Reserve, which by that time should approximate the total amount of the Loan, may be employed to write down the Fixed Assets. This will appeal to stores that have been erected on leasehold land, and especially to those that may expect to have to remove the building owing to the unlikelihood of obtaining a renewal except at a prohibitive rent.

In the case of a store carrying no debt for the cost of its construction, it is advisable that, apart from meeting out of Revenue, the cost of Building and Plant repairs and renewals, a certain sum should be included in each annual budget for depreciation, collected through the Working Levy, and invested in State or Federal Bonds, thereby creating a Reserve Fund, which is allowed to accumulate at Compound Interest. This method, if scrupulously followed, often does away with the necessity of providing further Capital for replacements, since the investment ensures that the money will be available when required.

On the "Assets" side we show how the Capital and Loan money has been invested in Fixed Assets (i.e., Land, Buildings, Machinery, Plant, Roads, Dams, Tools), and in Floating Assets (Stocks of Fuel and Stores; or those incidental to the conduct of the business, viz.: Space Rent outstanding; Insurance paid in advance; or Bank and Cash balances).

Depreciation.

Depreciation in its commercial sense really means "expired Capital outlay," and extends only to the cost of replacement of assets, the waste on which occurs in the process of earning revenue.

DEPRECIATION must be distinguished from FLUCTUATION, which is a difference in the value of an asset of a business arising from some cause or causes extraneous to the objects for which the business was formed.

Fluctuation may be either favourable or adverse, and is essentially temporary in nature.

DEPRECIATION, on the other hand, DENOTES A PERMANENT DECREASE IN VALUE.

Thus, a Company may have acquired a piece of land, upon which it has erected a Cool Store. Owing to the growth of population and the general prosperity of the neighbourhood, this land may, in a comparatively short space of time, have largely increased in value. This increase will not be recorded in the accounts. Indeed, to write up the value of the asset would be a most imprudent procedure. As the value of the land has increased so conversely, perhaps in the future it may decrease.

DEPRECIATION may also be distinguished from WASTE—a legal term which denotes a dealing with landed property in such a way as to

alter its character. It may, indeed, be ameliorative, as, for example, when an old building is modernised.

Waste may be:—

(1) "Commissive" (Voluntary) in the doing of some act which causes an alteration amounting to waste.

(2) "Permissive" in allowing a continuance of some existing cause or process which results in an alteration amounting to waste.

e.g. Cutting a new doorway in a building, felling trees, would be voluntary waste;

Failing to protect buildings by painting and repairing would amount to permissive waste.

DEPRECIATION is a more comprehensive term than WEAR and TEAR, which denotes a decrease in value from use only.

DEPRECIATION—subject to what has been said on fluctuation—EMBRACES A LOSS OF VALUE ARISING FROM ANY CAUSE OR CAUSES.

CAUSES OF DEPRECIATION may be classified:—

(a) Internal—a gradual decrease in value inherent in the asset, e.g., the depreciation of plant consequent upon its use.

(b) External—a decrease in value of an asset due to some other cause, e.g., the depreciation of plant by its becoming obsolete in consequence of an improvement in the machinery which enables the same work to be done more expeditiously and more cheaply.

Necessity of Providing for Depreciation.

It is necessary that the depreciation of the assets of a concern be taken into account in order that the Balance-sheet may show the true value of those assets; for if it were disregarded, the assets would in all probability be over-valued, with the result that a false statement of affairs might be presented. This necessity of providing for depreciation may readily be seen from a simple illustration:—

Suppose a Company adds to its plant a machine costing £1,000: this purchase constitutes what is known as a "capital expenditure." The time will eventually arrive when this machine will be worth either nothing at all, or at most but a few pounds as scrap-iron. In this case, let us take the "life" of the machine as ten years, its scrap value as £20; an annual sum of £98 should be charged against Revenue. Were provision for depreciation not made, it might be necessary to raise further Capital to replace the asset.

Methods for Providing for Depreciation.

Various methods are open for adoption, the principal being:—

(1) REVALUATION. This method is usual in the case of tools, horses, patterns and similar assets, although neither usual or practicable for Fixed Assets in general. It involves the taking of stock of the articles in question and valuing them. Any loss upon a re-valuation is debited to Profit and Loss and credited to the particular Asset Account to reduce its value in the books accordingly.

(2) FIXED INSTALMENT. Under this method the estimated number of years that the asset will remain in use and of value to the business is ascertained, as well as its break-up value, which is then deducted from the cost and the remainder divided by the number of years the machine is estimated to last; Profit and Loss A/c is charged annually with this quotient. This method is suitable for short leases, patents and other assets which leave no residual value behind them.

(3) REDUCING BALANCE. Under this method a fixed percentage is written off the diminishing value of the asset each year, so as to reduce its book value to zero by the time its actual value is nothing, all necessary repairs and renewals being charged against revenue for the period in which incurred. The system is suitable for fixtures, plant and machinery, etc., and it causes a more even annual charge against Revenue, and this is reasonable, for while in the early years of the "life" of the asset the repairs are light, the depreciation charge is heavy. On the other hand, in the later years when the repairs and renewals are more likely to be heavy, the amount charged to Revenue for actual depreciation is reduced.

(4) SINKING FUND. More correctly termed the "Depreciation Fund" or "Redemption Fund" system. Under this method a certain sum is charged against profits annually, and invested outside the business. The investment being allowed to accumulate at compound interest, so that by the time the asset ceases to be of any value to the business, the investment ensures that the money will be available to replace the asset when required.

(5) ANNUITY SYSTEM. This method possesses the advantage of being scientifically correct. The amount to be written off annually is calculated from annuity tables.

(6) INSURANCE POLICY. Under this method a policy is taken out with an insurance company for the sum required to replace the asset at the time its value to the business is nothing.

The Application of Electrical Methods to Cool Store Problems.

A paper by L. C. Macarthur, A.M.I.E., Aust., State Electricity Commission of Victoria, before the Fruitgrowers' Cool Stores Conference.

ONE OF THE FIRST questions that will arise when any directorate of a cool store tackles the problem of the electrification of their plant, is, at what price can electrical energy be purchased from the supply authority operating in the particular locality. The State Electricity Commission of Victoria serves the majority of those areas in which the affiliated stores of the Fruitgrowers' Cool Stores Association of Victoria are located, and as the State scheme may, some day, embrace the whole of the provincial areas of the State, the Commission's standard commercial power charges will be of interest.

On the 1st January, 1925, the Commission introduced two part tariffs, and since their inception, remarkably rapid growth in the commercial power load connected to the Commission's system has been made. As this paper deals with the application of commercial power two part tariffs, those only will be outlined.

As its name indicates, a two part tariff consists of two parts, a service charge, and an energy charge. The service charge, for commercial power, is based upon the number and horsepower of motors installed in a particular plant, and varies in different localities, according to the cost of giving supply to that locality. The energy charge is at a flat rate, and does not vary—except for consumption discounts—in any given district.

The Commission gives a discount on the service charge on account of the number of motors installed in a particular plant because of the usually evident diversity of load among the motors. These discounts range from 5 per cent. on a monthly consumption of 5,000 units to 11 per cent. on using 50,000 units. The service charge ranges from 4/6 to 7/- per h.p. per month; energy, 1d. to 1¼d. per unit.

Then follow detailed descriptions of compressors (high speed motor advocated), switch and starting gears; also motors for driving pumps and fans.

It is preferable where the capital will permit to

instal individual motors

to operate each of the pumps and fans, thereby, in most cases, obtaining a discount on the service charge imposed upon the installation, and eliminating all shafting losses.

Shafting losses are often responsible for a very considerable portion of the electricity consumed by a plant, and in quite a number of cases the saving due to its illumination will pay the cost of the individual motors in a comparatively short time. The question is one that it always pays to have thoroughly investigated.

In cool stores operated by

suction gas or oil engines,

it is generally found that machines of a horse-power far greater than is necessary, are used, because it is sometimes difficult to ascertain true horse-power if the engine is operating with inferior fuel, or is not in good repair. An electric motor works at its best, from ¾ to full load, and will always give full load, therefore a very accurate determination should be made in order to ensure that a machine of the correct size is utilised.

In order to make an accurate forecast of the consumption of electrical energy that would be used in a cool store, it is necessary to make very careful investigations of the operating characteristics of the store.

In this paper it is assumed that ammonia compressors are used to obtain the refrigeration effect. The unit consumption of a cool store will largely depend upon the following, which are some of the items that influence the consumption of electricity:—

(a) The amount of fruit cooled.
(b) The time the fruit is in store.
(c) The insulating properties of the walls, ceilings and floors of the store.
(d) The condition of the compressor and expansion system.
(e) The amount of cooling water available and its temperature.
(f) The amount of condenser piping available.
(g) The amount of ammonia in the system.
(h) The manner in which the plant is operated.
(i) The density of the brine.
(j) The condition of all joints in the ammonia system.
(k) The proportion to which the store is full.
(l) The frequency and duration in which cooling chamber doors are opened.
(m) The heat generated by micro-organisms in decaying fruit.
(n) The atmospheric conditions prevailing in the particular locality.
(o) The lighting conditions of the store.

A refrigerating machine is simply a heat pump; it pumps heat out of the substance to be cooled and dumps it into the atmosphere by the medium of the condenser. The amount of heat to be pumped out of any substance is very simply calculated, provided the temperature of the substance is known before and after cooling, and its specific heat. The specific heat of a substance may be defined as the quantity of heat in British thermal units required to raise or lower 1 lb. of the substance 1 deg. F.

The board of directors of a cool store, having made observations of the operating characteristics of their particular store, may decide that the thermal efficiency is low and are faced with the problem of how to improve matters.

Electrified cool stores offer the best opportunities of observing whether a store is efficient or not, because month by month they are furnished with an account from the supply authority, together with the number of units of electricity consumed. Should any fault have occurred in a particular month, it is reflected in the number of units of electricity consumed, and an intelligent observation of these units may make it possible to remedy any trouble immediately, and thereby save considerable money in operating costs.

The problem is therefore how to keep the energy consumption as low as possible, and to do this an analysis has to be made of the items affecting unit consumption, set out previously in this paper. Taking these items one by one, it is possible that some light may be thrown on the causes of high energy consumption in cool stores.

(a) "The amount of fruit cooled." This is our starting point, and, as the fruit has to be cooled, no saving can be effected with this item.

(b) "The time the fruit is in the store." This item affects the time in which heat transmission occurs through the walls, ceilings and floors of the store. The longer the fruit is stored the longer these heat transmission losses are for the season in question. This loss is therefore practically uncontrollable as far as the time the fruit is stored is concerned.

(c) "The insulating properties of the walls, ceilings, and floors of the store." The heat transmitted by the walls, ceilings and floors of a cool store is dependent on:—

(1) The type of insulating material used.
(2) The area of the transmitting surfaces.
(3) The mean temperature difference between the outside and chamber temperatures.

Very often the insulating material becomes wet or damp, and settles, leaving an air space on top of the wall of the store. Care should be taken to ensure that the insulating material is kept thoroughly dry, and any space due to settling, filled by further quantities of the insulating material.

The Area of Transmitted Surfaces.

The larger the cubical content of the store, the less per case capacity becomes the loss due to the area of the transmitted surfaces, because the area of the transmitted surfaces does not increase in proportion to the cubical contents of the store. This is one of the reasons why a big cool store should have a better thermal efficiency than a small store, and consequently a smaller consumption of electricity per case per annum.

The mean temperature difference between the outside and chamber temperature.

This, of course, is beyond the control of the operators of the cool store.

(d) "The condition of the compressor and expansion system." This is very often the cause of considerable inefficient operation, therefore care should be taken to see that everything connected with the compressor and expansion system is in thorough working order. The faults most commonly met with under this heading are:—

(1) Leaky piston in compressor.
(2) Leaky valves in compressor.
(3) Insufficient ammonia in system.
(4) Leak in the ammonia piping system and valves.
(5) Collection of liquid ammonia in expansion system at low lying points.
(6) Piping and valves with no, or insufficient, lagging.

The losses from these causes can be very considerable, and a careful check should be made to ensure that none of these faults exist in the system.

(e) "The amount of cooling water available and its temperature." As the cooling water for the condenser has to absorb all the heat pumped out of the fruit, it should be as cool as possible. The condenser should be in an elevated position, and be surrounded by a wooden shading structure designed and placed in a position so that any wind will freely blow through it and evaporate the water. The process of evaporation is really the principle of refrigeration. This process is illustrated when a bather emerges from the water when a wind is blowing. When the wind strikes the wet body a cold feeling is immediately felt, and is caused by the evaporation of the water on the body.

(f) "The amount of condenser piping available." The quantity of pip-

ing available should be at least 100 feet to the ton of refrigeration in use, and the condenser water should be applied to the piping, so that the whole surface is thoroughly wetted.

(g) "The amount of ammonia in the system." If insufficient ammonia is in the system, the compressor cannot do its work economically. The system should be purged for air frequently, and in a proper manner to ensure that no air exists in the system.

(h) "The manner in which the plant is operated." This has reference to the cycle in which fruit is put into and taken out of the chamber. For preference, the fruit should be put into the store in the morning, as early as possible, when it will be of a fairly low temperature. In general, I should say that the doors of the chamber should not be opened after 12 a.m. until the next morning.

(i) "The density of the brine." The brine used in connection with a cool store is continually weakening, owing to the collection of moisture from the atmosphere. It is very important that the brine should be of a specific gravity of 1,150 when measured at a temperature of approximately 60 deg. F., and not when cold. An ordinary car battery hydrometer is very suitable for this purpose, and is preferable to the salometer. If the specific gravity is allowed to rise, freezing on the coils takes place, and the ice forms an insulation with corresponding loss of efficiency in the system.

(j) "The condition of all joints in the ammonia system." This point has been stressed under "d" above.

(k) "The proportion to which the store is full." It is always difficult to keep temperature in a store when it is only partly full. This is due to the fact that fruit has a higher specific heat than air, and consequently variations in temperature are far more rapid when the store is only partly full.

(l) "The frequency and duration in which cooling chamber doors are opened." Every time a cooling chamber door is opened, the cold air, being heavier than the outside warm air, falls out, and is replaced by a like quantity of warm air. The heat has then to be extracted from the warm air when the door is closed again.

(m) "The heat generated by micro-organisms in decaying fruit." For the purpose of this paper this item can be neglected.

(n) "The atmospheric conditions prevailing in the particular locality." This, of course, is uncontrollable.

(o) "The lighting conditions of the cool store." Electric lights are very often left burning in cooling chambers by mistake. A twofold loss occurs when this takes place. Not only do the lights consume energy, but they generate heat, which has to be extracted by the compressor. The compressor has to absorb a like amount of energy from the motor to extract this heat generated, plus an amount to overcome all the losses in the whole plant.

Cool Storage of Berry Fruits.

BERRY fruits are the most perishable of our fruits, writes Mr. G. B. Tindale, B. Agr. Sc., in the Victorian "Journal of Agriculture," and it is indeed on this account that they are not more extensively grown. Owing to their very limited life, and to their extreme susceptibility to mould attack, cool storage of them in the fresh state is quite futile. With the addition of sugar, however, they may be held for many months, and in the United States of America large quantities are so treated, and are disposed of throughout the year.

Experiments conducted at the Government Cool Stores last season demonstrated the value of such a process for storing Raspberries, Strawberries, Loganberries, and Black Currants for periods of many months.

The containers used were enamel buckets, although wooden casks or barrels would be equally suitable. The procedure adopted was to place a layer of berries in the bottom of the container: this was then covered by a layer of sugar, and the process repeated until the container was filled.

The object was to mix the berries and sugar intimately, and equal weights of berries and sugar were used, although probably the amount of sugar used could have been slightly reduced, especially in the case of the Strawberries.

The berries were stored at 25 deg. F., a temperature at which the mixtures do not freeze. The possibility of mould attack is very remote, not only on account of the low temperature, but also owing to the presence of the sugar, the mixtures being too concentrated for mould growth to occur; thus the sugar acts as a preservative.

The Raspberries, Loganberries, and Strawberries were treated in December, and the Black Currants in February. They are still in a perfectly sound and fresh condition, and on removal from store they keep in a wholesome condition for many weeks.

The mixtures are now like pulp, and are most suitable for kitchen use, while if the juice is extracted and added to iced soda water, it makes a wholesome pure fruit-juice drink.

The Strawberries did not keep quite so well as the other berries, but this may be accounted for by the fact that they had somewhat deteriorated prior to being placed in storage.

The cost of storage is low, for berry fruits take up little space when compared with equal weights of other fruits. The first cost of the containers would be rather heavy, but these could be used from season to season.

If such a method of storage were adopted here, it should be possible for the berry-growers to arrange for a continuous supply of fresh berries to restaurants, soda fountains, etc. There is little doubt that there would be a would be ready for immediate use without further preparation.

MARGETSON
& CO. LTD.
Fruit Importers & Salesmen
30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool
Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL
Head Office—Covent Garden Market, London, W.C.
Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.
Shipping Nos.
431 and 432

Cold Storage Assists Fruitgrowers.

IT'S HISTORY AND DEVELOPMENT.

Modern Equipment Will Serve Growers of all Fruits.

A Review of the Operations of R. Werner & Co. Pty. Ltd.

THE advantage of any particular method in the treatment of the produce of primary industry often takes many years to prove, and when an established fact, becomes part and parcel of that industry. So we have now come to a time when cool storage for all fruit is a necessary adjunct to the fruit industry, and find that, like many other industrial processes the production of the necessary cold is available in a form that the most inexperienced grower may have no hesitation in installing a plant.

The Pioneering Stages.

Much credit is due to the pioneers of the movement for erection of cool store plants. Among the first were Mr. E. Lawford, of Doncaster and the Toomuc Valley Orchard Co., of Pakenham, Victoria, who built cool stores on their orchards. Mr. E. Lawford, Senr., Doncaster, Victoria, a well-known orchardist, then made a further move in the matter, and called a meeting of fruitgrowers in the Doncaster district, who decided to approach the Government for assistance, with the result that the first cool store at Doncaster was erected in the beginning of 1905. They recognised the enormous possibilities of the development of cool storage for fruit, and from a small beginning, rapid developments were made, until at the present time there is cool storage capacity in Doncaster alone for nearly 250,000 cases of fruit. This development spread very rapidly to other districts, and practically every Apple growing district in Victoria now has its own co-operative cool store. In addition, there are many privately owned stores, not only in Victoria, but all the other States of the Commonwealth.

System of Cooling.

Naturally the system of cooling fruit in the first place was not all that it might be, but as the result of experiments and investigations by cool store owners combined with the scientific and engineering knowledge of manufacturers the systems have been brought up to the very efficient stage they are in at the present time.

Cool Store at Cudlee Ck.,
South Australia.
(Refrigerating Machinery supplied
by R. Werner & Co. Pty. Ltd.)

Those growers who have stored fruit under the two systems, namely, dry air circulation and direct expansion, have formed definite opinions in favour of the one or the other. There is no doubt that fruit can be stored successfully by either system with proper care and attention.

All the experience of cool storage of fruit up to the present has proved it, and, although the direct expansion system has been introduced principally for small stores for the convenience of running in the absence of the brine tanks, pump and fan, at the same time it must not be overlooked that a certain amount of space has to be sacrificed in the chamber for the coils, and also that a certain amount of moisture is unavoidable. This, of course, may

be an advantage regarding the fruit stored, as it may prevent a certain amount of wilt, which is sometimes noticed on fruit stored on the dry air circulation system, and the experience of growers who have stores of their own cooled by direct expansion seem to think so.

One advantage of the direct expansion cooled rooms is that the air in each room is not intermingled with the air of any other room. In a number of rooms cooled by the battery system the air of all rooms in the building cooled by this system is practically mixed right through the building, and the odours of different fruit are intermingled to such an extent at times that some of the Pears have a pronounced Apple flavour, as all the flavour of the Apples is not taken up by the brine, which it will do to a certain extent.

Any highly flavoured fruit, such as Oranges, Lemons, Peaches, and Apricots, should not be stored in the same building with Apples and Pears, where the battery system is installed. These should be stored in separate rooms, and separate rooms are better cooled by the direct expansion system.

Private Stores.

The co-operative store at a central depot has proved to have many advantages in thickly planted areas, but the small privately owned store is rapidly becoming popular owing to the saving of time in packing and grading, especially where family labor is available, and the orchard is remote from an established co-operative store. In addition the driving power of crude oil engines is becoming available in smaller sizes than some five or six years ago, and electric power is penetrating the country districts, so that any grower producing 3,000 or 4,000 cases will do well to investigate the advantages to be gained by having a cool store right on his orchard.

Cool Stores a Valuable Adjunct for Canneries.

The advantages of a cool store adjacent to the canning factory is now being realised, particularly as a result of the experiments of one or two very large canneries which have installed refrigerating plants in connection with their business. A cool store adjacent to the cannery enables them to hold their fruit, and spread the canning season over a longer period. Particularly has this been found so in connection with Apricots. In addition to extending the canning period, which provides for more continuous operation of the factory, it is invaluable as regards the supply of labor, and assures the maximum of grading fruit with a minimum of wastage. By close attention to temperature regulation, Pears, especially, may be made available for processing at the exact time, and so enable a definite schedule of operation to be set out.

Messrs. R. Werner & Co. Pty. Ltd., of Burnley-street, Richmond, who have installed refrigerating plants recently at Shepparton and Ardmona for nearly 100,000 cases, will be pleased to supply details in this connection.

Citrus and Dried Fruits.

Another important development in connection with cool storage is the success that is now being met with, after many years of patient experiments, in connection with the cool storage of Citrus fruits.

An important test recently carried out by the Victorian Department of Agriculture has shown many advantages in regard to the preserving of dried fruit, also in cold storage. The test showed that fruit stored in cool stores as compared with that in the ordinary commercial warehouse, had a much fresher appearance, and was free from excreta and webbing.

Finance.

The matter of finance is, of course, important. Facilities are now available whereby private orchardists can be financed in the matter of erecting cool stores. This is in addition to the opportunity which is offered by the Government under Act of Parliament.

A Heavy Frost After Three Months Nonstop Run.

Royal Agricultural Show.

Growers who will be visiting the forthcoming Royal Show should take every opportunity of inspecting the instructive display of cold storage equipment which will be staged by Messrs. Werner & Co. Pty. Ltd., at the forthcoming Royal Agricultural Show in Melbourne. Representatives of the company will be present, and will be delighted to give information in regard to cool storage problems.

In addition to Messrs. Werner & Co.'s own exhibit in the same pavilion as Messrs. J. S. Corden Ltd., in the Show Grounds at the corner of McCracken and Lobb-streets, an exhibit will also be made in conjunction with the Department of Agriculture's exhibit in the Agricultural Hall.

SCHEDULE OF RESULTS OF ELECTRICAL OPERATION.

(Compiled by Mr. T. E. Butler, A.I.C.A.)

	WANTIRNA, 1928.	MT. WAVERLEY, 1928.	CROYDON, 1928.	SOMERVILLE, 1928.	TWO BAYS—MOOROODUC.
Cap.	40,000.	30,000.	21,000.	20,000.	1927 Figures. 14,000.
Prin.	Direct expansion.	Air circulation.	Air circulation.	Air circulation.	Direct expansion.
Mot.	42 h.p.	37½ h.p.	41 h.p.	35 h.p.	21 h.p.
Com.	20-ton Werner.	16-ton Werner.	15-ton Atlas.	20-ton Werner.	10-ton Werner.
S.C.	5/6 per h.p. month, 5/- 1,000 sq. feet.	5/- per h.p. month.	5/- per h.p. month.	7/- per h.p. month. 5/- 1,000 sq. feet.	6/- per h.p. month. 5/- 1,000 sq. feet.
Con.	1d.	Power 1d., light 10d.	Power 1d., light 7d.	1½d. unit.	13 1½d. unit.

	Units	Hrs.	Fruit	U/HPH.	Units.	Hrs.	Fruit	U/HPH.	Units.	Hrs.	Fruit	U/HPH.	Units.	Hrs.	Fruit	U/HPH.	Units.	Hrs.	Fruit	U/HP.
Jan.	—	—	—		—	—	—	—	1,022	41	300	.61	—	—	—	—	15	—	—	—
Feb.	13,408	418	1,300	.617	4,180	188	5,000	.592	7,113	261	5,000	.66	5,790	265½	3,427	.624	690	45	—	.73
Mar.	14,608	456	20,000	.616	8,721	362	12,000	.64	9,212	331	17,000	.68	9,330	437	14,785	.61	1,185	79	—	.714
					6,800	288½	17,000	.629												
Apr.	10,144	340	35,000	.573	12,320	526	22,000	.624	6,825	248	17,500	.67	4,860	250¾	19,023	.55	1,065	70	2,000	.725
May	7,248	241	37,000	.578	6,350	272	28,000	.621	5,234	211	17,800	.60	2,880	142	20,977	.58	2,400	155	4,000	.737
Jne.	5,360	185	39,000	.553	3,900	178	30,000	.582	4,679	201	19,000	.57	5,280				975	162	7,000	.286
													Less approx. error,				Error in reading.			
													1,111			say	Av. for each month.			
Jly.													4,169	209	21,067	.57	2,457	162	—	.73
Aug.																	3,930	162	14,000	1.155
Sep.																	1,725	116	13,000	.708
Oct.																	1,800	123	10,000	.696
Nov.																	2,295	160	—	.683
Dec.																	1,155	82	—	.671
																	675	—	—	—
	50,768	1,640			62,271	1,814½			34,085	1,293			27,029	1,304½			17,910	1,154		—

With regard to the Two Bays figures, Mr. Butler states they gave him the whole of units consumption as power, whereas, it has since been ascertained that the figures include lighting, energy, and power required to drive a one horse-power motor for a grader.

LABOR SAVING DEVICE.

Patent "Mask" for Facing Cherries.

The "facing" of Cherries particularly, and other small fruits, such as Gooseberries, has inflicted its penalty upon the grower. Facing involves packing in rows the whole of the top of a case to make the pack look more attractive. When the Cherry season is at its height the process of facing is apt to become slipshod, particularly in big orchards, whilst even in the small places the time taken in facing cases imposes a severe handicap upon the grower and his assistants. At the best it is an irksome job. Some time ago growers in the Young and Orange Districts of N.S.W. held a conference hoping to eliminate facing altogether, but the necessity for putting up an attractive article decided the Conference against the proposal. Growers did not buck against the cost, it was the expenditure of so much time when it was needed for packing and other important duties, that agitated them.

Last year the proprietors of the Virginia Hygienic Orchard Company patented a device for their own use, but growers in the Young District were so interested that it was decided to make the device available to them. During the season the mask came under the notice of growers in the Orange District and a large trial order was despatched.

It is expected the device known as the "Pacemaker" mask will come into general use this year as enquiries from many different sources are now being made.

It is claimed for the "mask" that the labor involved is reduced to a minimum. Growers can face four cases to one by the old method. Handling is reduced, and less damage to fruit results. Ventilation of fruit is provided for. The novel method of displaying the fruit in a "mount" like a picture, makes the idea superior in every respect to the old laborious style; and growers are enabled to advertise their fruit much more readily than formerly.

In this issue there is published an advertisement of the patentees who will be prepared to supply the requirements of growers, and will make concessions to the trade including packing houses. Growers who have used the "mask" say it is revolutionary, and they would not go back to the old method.

The Future of the Fruit Industry.

The future of the fruit industry, its success or failure, depends on the interest, care and attention of every grower. The problems of growing fruit have been solved, but the problems of marketing have yet to be overcome. This must be done.

It is a subject to be seriously considered, and we are convinced that if growers are to realise the profits rightfully theirs, they must devote more attention to **right marketing.**

Both the retailer and the consumer must be considered. The consumer is now demanding well-graded fruit of good quality. Good fruit well packed is not feared in competition, but poor fruit flooding the market plays havoc with prices and leaves the grower at the mercy of the buyer. Authorities state that the success of fruitgrowers for a number of years to come depends on the improvement of the grading and packing methods.

If consumption is increased, future crops will be sold at a profit. One suggestion towards this goal is the elimination of poor varieties. A grower cultivates, prunes, sprays, picks and packs a poor variety and sends it to market. This involves the same amount of time and labour as a better variety, and what is the result? The poor variety, not being attractive to the consumer, has a slow and most likely an unprofitable sale, returning to the grower frequently not sufficient to cover expenses. This need not be so. If the same thought and labour is put into the good saleable variety, the return will be profitable. The present sorting of Apples into grades can be much improved upon. What has been done up to now has only touched the outside fringe. There is still a long way to go before we can say, "It is impossible for anyone to market better or more attractively packed fruit." When we reach this Elysium, something worth while will have been accomplished.

Another step towards this end is the use of modern labour-saving equipment to enable a uniform pack to be turned out at a minimum of cost. The small grower must consider this in conjunction with the larger grower and packing house, for to be of any permanent value to the industry, the improvements must be universal.

The demand from the consumer is of vital importance to the grower, and anything he can do to induce the public to buy his fruit is another step towards success.

A case of fruit of uniform size, well packed in a manner to attract attention, and with the quantity in the case marked clearly on the outside, will always attract the retailer. He buys it knowing that he is getting exactly what he wants, and with the assurance that he is in a position to give his customers better satisfaction, without wasting time in sorting over both large and small fruit. This is but a further step on the same road.

Grading, sizing and attractive packing are the foundation stones of successful marketing. The uniform pack creates a demand, and a grower who will earnestly study this aspect of his industry, that is, the marketing of his fruit, will find in a very short time that consumption has increased to such an extent that the problem will no longer be, "How can I sell my fruit?" but, "Where can I get enough to fulfil the demand?"

These are one or two suggestions—there are others equally worth while. This is a day of standardisation, and the industry must come into line.

There is no reason why the same care and attention should not be paid to putting up fruit for market as is used with every other commodity. The public is induced to buy confectionery, food stuffs, etc., by the appearance of the package and the quality of the goods. The same methods applied to fruit will create the demand, inspire confidence in the goods, and so result in increased sales and better prices.

For a long time growers have been at a disadvantage because the necessary facilities for handling their packs have not been available to them. No grower need now be without efficient machines for sorting, sizing and packing his fruit. The "Lightning" Fruit Grader Co., of Melbourne, are manufacturing and supplying to all parts of Australasia a wide range of machines suitable for every class and variety of fresh fruit. These machines can be obtained on easy terms, full particulars of which will be supplied by the company.

"To choose the Best is Wisdom"

ROYAL SHOW MELBOURNE

SEPTEMBER 20 to SEPTEMBER 29, 1928

Grades into 8 sizes. Inspect this Model on our stand.

At their usual Stand—
No. 65 Plummer Avenue

The "Lightning" Fruit Graders

will again be demonstrated.

Working demonstrations all day will show fruits being graded for quality and then sized. Models to suit every size Orchard and Packing House—Complete Citrus Packing House Equipment, etc.

Lidding Presses — Clamp Trucks — Paper Holders—Ethylene Gas.

THE "LIGHTNING" FRUIT GRADER CO.

5 Hoddle Street, Collingwood, N.9, Melbourne, Vic.

QUANTITY *plus* QUALITY *equals* SUCCESS

Successful fruit growing is profitable fruit growing. A successful business man is one who carries on his business from year to year at a profit, and the fruit grower, no matter what his line of production is, should place his holding on a business footing.

QUALITY alone will not always pay. QUANTITY, by itself, should not be the sole aim of the fruit grower. But when QUALITY is combined with QUANTITY the result can't very well help being profitable.

But it's not so easy, perhaps, to use this advice to go for the special quality and the high yield. Success, so we are told, was never easy, but following the rules invariably makes for an earlier realisation of success than if haphazard methods are followed.

The most productive apple orch
of Ammonia per acre every yea
the fruit

Orchardists in Australia are the principal users of Sulphate of Ammonia . . . they've discovered that IT PAYS.

Sulphate of Ammo
any Fertiliser A

A Most Important Rule

One rule—fast becoming one of the *most important rules*—is to use more nitrogen. Use more nitrogen, and see the result in bigger yields of better-quality fruit. See the improved appearance of tree or vine, or berry cane. Note the healthier foliage and the all-round development in "above ground" growth. Better plants *can't help* growing bigger and better crops.

And mentioning nitrogen naturally takes one's thoughts to SULPHATE OF AMMONIA. Sulphate of Ammonia is now a sort of standard nitrogenous fertiliser, produced in Australia, and enjoying the distinction of being the cheapest local source of nitrogen supply; that is to say, cheapest per unit of plant food (which is the only sensible way of buying any fertiliser).

alia uses 2 cwts. of Sulphate orked well into the soil when to set.

Healthier vines, greater yields of either fresh or dried fruit . . . . . directly traceable to Sulphate of Ammonia.

be obtained from
Packing Shed.

Clearing Land of Trees and Stumps.

Valuable Labour-saving Devices for the Orchardist and Farmer.

Trewhella Bros.' Implements Solve Your Clearing Problems.

In the realm of mechanics, there is one outstanding example of an Australian invention having won its way by sheer merit into widely scattered portions of the world. This is the now widely known device for removing huge trees and stumps, invented by Messrs. Trewhella Bros.

By reason of their power, efficiency and economy, these tree and stump pulling machines are now largely used throughout Australia and New Zealand, as well as in England, Scotland, Ireland, Europe, Canada, U.S.A., Africa, the East Indies and elsewhere. This is surely a tribute to the value of the implements themselves and a good advertisement for Australia.

"Getting the Pull" on a big stump with the Trewhella "Monkey" Horse Grubber.

General Survey.

It is of interest to take a survey of the powerful machinery manufactured by Messrs. Trewhella Bros., because this will indicate the wide range of subjects from which primary producers and contractors may choose.

The implements include jacks in various lifting operations, also for tree-pulling and grubbing roots, while special grubbers have been designed to suit different conditions.

"Wallaby" jacks are those designed for 2½, 4, and 6 ton lifts. They are variously suited for log-rolling and clearing land of timber.

"Monkey" jacks include the 8 and 10 ton class. The former is extremely useful for grubbing roots and stumps, while the latter, which embodies all the good features of the previous jacks with a number of improvements, is widely known as the King of Grubbing Jacks. For tree and stump pulling, the "Monkey" grubber has special advantages, doing the work much quicker than the jacks. Its best work can be done when the ground is soft or too wet to use a jack or similar implement. In addition to its capacity to pull out almost any tree or stump, the "Monkey" grubber can be used as a winch for many purposes.

Appreciative Users.

Users of "Trewhella" implements express keen appreciation. The implements are built to stand plenty of hard, solid work, and with fair usage, regular oiling and reasonable care, will last a lifetime.

The following is typical of many appreciative letters which have been received from fruitgrowers and farmers: "I am highly pleased with the 'Monkey' jack. Owing to the almost incessant rain, I only worked it about nine days, and in that time took out about 260 Apple trees, some of which were nearly 30 years old, and over one foot in diameter in the trunk, with spreading tops."

Visitors to the Melbourne Royal Show will be welcomed to the demonstrations that will be given throughout the Show at the firm's stand, 91 Smith-street, Show Grounds. A complete range of the firm's implements will be on view, and representatives from Messrs. Trewhella Bros. will be only too pleased to give advice on land-clearing problems.

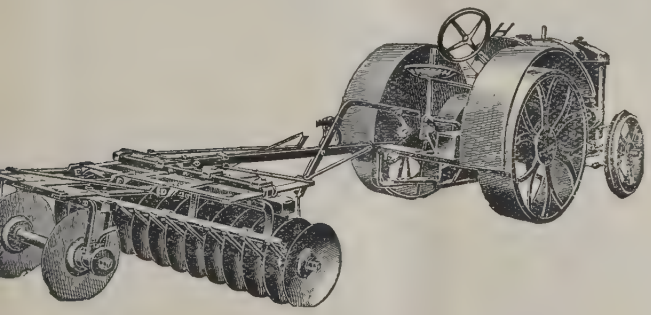
"Out."—The Stump shown above successfully grubbed with the Trewhella Horse Grubber.

Tools for Vineyard, Orchard and Garden

T. Robinson & Co. Pty. Ltd. Spotswood

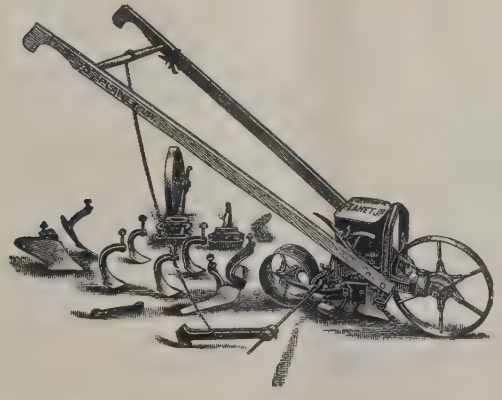
Exhibit Interesting Display at Royal Show.

All branches of Fruit culture have been catered for in the large and varied exhibit of tillage tools shown by the old-established firm of T. Robinson & Co. Pty. Ltd., Spotswood; in addition, the Market Gardener finds suitable equipment for his needs. No. 78 Skene-street houses a large exhibit of all farm equipment, which has placed this Company in the forefront of Australian makers.



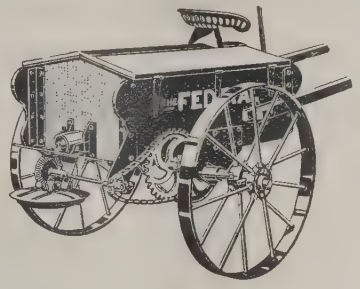
Patent All One-way Orchard Disc Cultivator.

This general purpose Disc Cultivator has won favour in both Orchard and plain country, especially in Maize land. The frame is built on the double truss design, ensuring great strength, the double wheel rocking forecarriage with correct draft keeps machine in right position; only one lever is required to set discs at accurate depth, adjustable for work under branches of trees or in open cultivation paddocks, for horse or tractor draft.



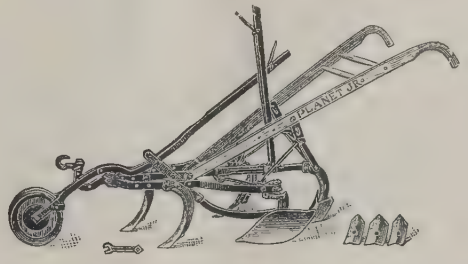
No. 25 Planet Jr. Hill and Drill Seed Double Wheel Hoe Cult. and Plow.

The complete Gardener—one of the many lines of Planet Jr. Garden Tools, embracing Seeders, Double and Single Wheel Hoes, Cultivators and Plows for hand operation, they provide all that is necessary in the way of labour-saving equipment to minimise the labour required in raising vegetables, and are a delight to their owners. A full supply of renewable and wearing parts are stocked by the Company.



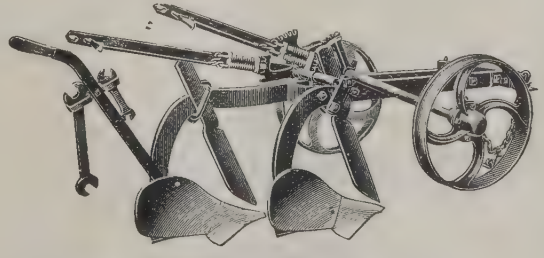
Broadcast Fertiliser Distributor.

Orchardists, as well as Graziers, have recognised the benefits of Top-dressing, and they will be interested in the two types of machines exhibited, viz., the Broadcaster and the Federal Spreader, the latter built with a 6ft. spread and low wheels, will be found the most economical for Orchard use, but if the Orchardist has grazing areas of rough or timbered land, the Broadcaster is recommended, as its design permits it to work in country inaccessible to the Spreader; the latter is also procurable in 9ft. and 12ft. widths, and is convertible to a Lime Spreader.



Planet Jr. No. 8 Horse Hoe and Cultivator.

Deservedly called the "Universal Cultivator," this implement has had an unbroken run of forty years amongst Orchardists in Australia, the all-steel pressed wheel cannot clog or break, and does not pick up soil or grit to wear the axle; the loose hub can be replaced when worn, providing always a straight running implement. Side standards are swivel type, and carry hillers hoe steels and all Planet Jr. cultivating attachments.



Double Furrow Mouldboard Orchard Plow.

This implement is a useful Plow for general purpose Orchard Plowing. Separate levers are provided for land and furrow depths, and are set well down out of the way of branches, and the plow can be worked close up to trees. Wheels are fitted with renewable boxes and broad rims and circular or knife coulters, as required.

A large range of single-furrow Plows suitable for orchard work are also exhibited.

ELECTROCULTURE

The Application of Electricity to Plant Life

All crops are considerably increased.

The enormous expenses of manure are eliminated.

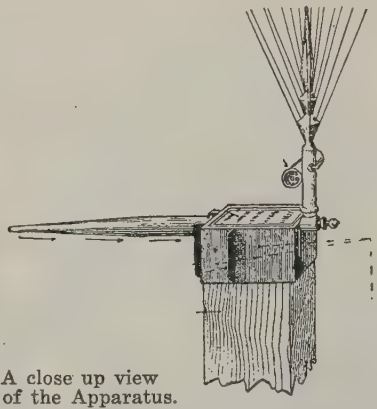
Droughts do not affect the crops.

Crops can be grown every year.

Crops can be grown in third-class soil.

The soil is aerated and free from insects and parasites.

Everything grown by electricity is hastened by three weeks at least.



A close up view of the Apparatus.

Fruit grown by electricity is more suitable for export.

The spraying and sulphuring of Vines is eliminated.

Vegetables attain enormous sizes, and contain more vitamines.

All animals fed on electrified fodder have perfect health.

The apparatus is cheap, it makes its own electricity and lasts for ever.

FIRST COST IS LAST COST

Electroculture is the Growers' Gilt-edge Investment

Write for Special Circular Giving Full Particulars to—

The Sole Victorian Agents :

LAW, SOMNER Pty. Ltd. Seed Merchants & Nurserymen Block Place, Melbourne

Electrifying the Soil.

What Electroculture Means.

Fruitgrowers and horticulturists in increasing numbers are taking up the new method of imparting electricity to the soil by means of electroculture, and large numbers of Victorian growers are anxiously awaiting the results of tests where electroculture has been installed.

There have been very favourable results in other parts of the world, where electroculture has been tested over a period of one to two years, but in Australia we are still in the initial stage with all the fascination of a new discovery.

Many growers who have installed electroculture are still awaiting definite results, but there are several who have already noted improvement in plant life, and are sanguine of ultimate success.

A New South Wales Tomato-grower who installed electroculture, last year, claims to have no diseases among the plants since it was installed, and has cropped Tomatoes up to two pounds in weight. Watermelons weighing 70 pounds were also grown by him on ground that was not manured. This grower, Mr. A. F. Paton, of Sunny Brae, N.S.W., in a letter to Messrs. A. Trouchet and Son, Forrest Place, Perth, says he has received numerous enquiries from growers in N.S.W., and has told them he was so satisfied with present results that he intends erecting more apparatus.

Mr. H. Lovell, of Oakdale, N.S.W., claims to have succeeded in growing Passion-fruit on land that would not grow this fruit before the apparatus was installed. Mr. J. McCaughan, of Collie, West Australia, is another Tomato-grower who has had a bigger crop from electroculture.

Mr. Burgess, Apsley, Queensland, is a Banana-grower who has an electrified strip, where the plants have made a very marked increase in growth since installing electroculture. He has since placed an order for 24 more apparatus.

The apparatus now in use for supplying electricity to the soil is of recent birth, but the science of electroculture is an old one, and dates back 300 years.

For centuries past scientists had discovered that this mysterious force of electricity was connected to the life of men, of animals, and of plants, and having noted its effects on animated bodies, have applied it to the benefit of vegetation. Many inventors have applied electricity to the development of plants and they have all obtained impressive and conclusive results. It was, therefore, a long-established fact that electricity influenced the life of plants and developed them, but no one had found the means and ways of applying this principle in a practical manner until an indefatigable searcher, M. Justin Christofleau, a well-known French scientist, solved the problem by a system of electroculture, after many years of research.

Knowing the different effects on vegetation between heavy showers of rain of short duration, as against a light and continuous shower, and basing himself upon his contention that Nature is quite capable, by herself alone, of supplying the necessary nourishment to plant life, the inventor—M. Christofleau—has managed to capture the positive electricity of the atmosphere, drain it, and impart to the soil, a feeble, but continuous current. He has also captured the Telluric currents, and it is the combination of the two forces that form the current which, when it is imparted into the soil by means of a subterranean soft iron wire, fuses nitrogen, carbon, and oxygen with the moisture in the soil, thus forming carbonate ammonia, which is necessary to all vegetation.

It is claimed for the new electroculture apparatus that insects in the soil will be destroyed after the third year, where it is installed. There has, however, been several cases in Australia where insect pests diminished after the first year.

The entire apparatus is light, portable and inexpensive. It is also inexhaustible and foolproof. It is fixed on the top of a 20ft. pole, and Nature does the rest. Underground wires run northwards from the poles, electrifying the soil.

Once the apparatus is fixed, there is no need to interfere with it, and it remains there indefinitely. It will thus be seen that the first cost of installation is the only expense that the grower need worry about.

The apparatus will electrify a strip of land 14 feet wide, that is, 7 feet on either side of the wire. The length of the strip is unlimited. It is advisable to manure the soil for a year after the apparatus has been installed. During the second year, the grower may use his own judgment regarding manure, but it is claimed by successful users of electroculture in other parts of the world that manures are not necessary after a couple of years. They also contend that the best results are obtained when the apparatus is not overshadowed by a tree within 100 yards directly south of the pointer. Overshadowing of the pointer is said to rob the apparatus of a certain amount of voltage.

During the course of the next twelve months, it is expected that many definite results from growers all over Australia and New Zealand will be recorded, and those who have been watching for definite results with keen interest will quickly install electroculture should favourable results be recorded in the majority of cases.

It is believed that electroculture, in addition to promoting bigger crops and larger fruit, enriches them with vitamine. If that hope is fulfilled, a big demand will set in for electrocultured products.

PERSONAL.

Mr. Geo. A. Green, Secretary of the New Zealand Horticultural Trades' Association, returned to the Dominion early in July, after having had an interesting time in Australia. Mr. Green visited the nurseries and seed warehouses in N.S.W., Victoria and South Australia. By courtesy of the Departments of Agriculture he was also shown over many of the fruit producing areas, particularly Citrus, in Victoria, N.S.W., and South Australia. Mr. Green states that salt problem is very severe in many of the irrigation settlements.

As regards bud selection, there is much work to be done.

Mr. Green approves of the idea, published in the "Fruit World," that Mr. A. D. Shamel, the Plant Physiologist of the U.S.A. Department of Agriculture, should be invited here for six months to lay down a programme for bud selection.

OBITUARY.

Sincere sympathy is expressed to Mr. and Mrs. James W. Bailey, of Narre Warren, Vic., in the death of their only son, Sid., in his 17th year. Death followed an operation for acute appendicitis. The young man was highly esteemed for his manly qualities. He was doing well in his studies at the Melbourne Grammar School.

Mr. James W. Bailey is a well-known fruitgrower. The sympathy of his many friends goes out to the bereaved parents and their two daughters.

Queensland

Citrus Bud and Stock Selection—Inferior Nursery Stock—Fighting the Fruit Fly and Bunchy Top—Government Experiment Farms. Interesting Notes and Comments.

(By Our Correspondent.)

THE winter season has been most erratic, sudden changes from genial warmth to biting cold, alternating at short intervals to the detriment of vegetation (other than dormant deciduous trees) in general.

The planting of coastal fruit trees is practically completed, and the bare appearance of nurseries is evidence of a good demand.

For the coming season, the citrus trees will be from

selected budwood,

from the use of which improvement is expected, but unfortunately this is not the only feature requiring rectification.

Inferior soils in which the trees are planted, is a far more serious feature. Selection is necessary for the Navel Orange; for other leading varieties, Valencia and Joppa, vigor is the more important consideration, and with the most favored Mandarin, Glen Retreat, over production is mainly responsible for the early decay of trees.

In reference to

stock selection,

reference is frequently made to the root system, but little consideration appears to have been directed to the influence of the scion upon the stock. This is most obvious amongst both Orange and Mandarin, the Navel inducing a fine fibrous root unequalled by any other kind, and amongst Mandarins the effect is similar, the Emperor showing the least attractive root growth.

The average return per tree is recently stated to be under four bushels, and every reason given but the right ones; what can be produced under the most favored soil conditions has been evidenced this season in an extensive orchard in the Nerang district (Roeseller's) where one tree produced 50 bushels of first-class fruit.

Gayndah, which has been rather an obscure locality, came to light with the finest fruit in the Brisbane exhibition—perfect in every feature. Others were slightly larger, but lacked the fresh inviting appearance and weight of the Gayndah product. The show of fruit was excellent, and carried a very wide range of varieties, but when one reads of districts featuring 22 marketable kinds of citrus, it inspires the query as to what influence extravagent collections can have upon

reduction of varieties

and standardisation, and where wide collections of any particular class are awarded points ahead of standard kinds only (which no exhibitor would think of submitting) placing utility far in the rear, the educational aspect can only be accepted in a negative sense.

Inferior Nursery Stock.

The annual controversy at Wallangarra over imported stocks, is again to the front. One N.S.W. firm having, from their point of view, grounds for serious complaint, but opinions differ even in this line, and your correspondent, who for years practised nursery work, and has since been closely allied to it, can confidently recommend some of the southern nurseries for submitting the poorest specimens of nursery stock sent out in any part of the world. Victoria and Tasmania have this season submitted specimens of the class of trees they propose to send, and provided consignments come up to these standards there will not be the slightest occasion for adverse criticism.

Fighting the Fruit Fly.

Excellent results followed a fairly comprehensive and thorough trial to cope with our natural enemy, the fruit fly this season, the total losses being under 2 per cent. in the locality covered. Unfortunately the average grower is most indifferent, and this indifference is responsible for such heavy losses, but it requires less exertion to blame the Government for not providing sufficient inspectors to compel him to do the work necessary than to make any attempt toward doing it.

This applies, not only to an undue percentage of temperate fruit growers, but the Banana growers are in the same boat, and thus

Banana bunchy top

was allowed to obtain the spread it has. At the present time, upwards of 20 inspectors are engaged solely in connection with cleaning up the infested area, and there is not the slightest doubt but that the law will have to be freely availed of against defaulters, whose callous indifference is responsible for the position as it recently existed.

The Government have taken the matter up in a serious manner, and in addition to cleaning out the scourge, have started operations on

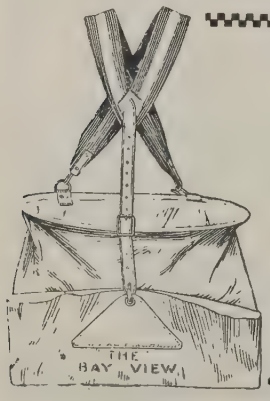
extensive experimental farms,

where all branches of the industry will be taken up, particularly in respect of diseases and increased production.

An entomologist has been sent to Java to endeavor to obtain parasites of the weevil borer and incidentally to bring back any desirable varieties not present in the State. The establishment of a northern station, and the opening up of suitable lands, will admit of the inclusion of a fair quantity of the Gros Michel variety which is admittedly a better carrier than the Cavendish, which now almost entirely predominates.

"Marvellous" New Fruits?

Some marvellous discoveries of "new fruits" have been reported in our principal daily press. A settler at Buderim submitted fruits of a



"BayView" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

AGENTS WANTED

To Influence Consignments of Apples by Reliable Firm

Write, Stating Terms, Etc., to—

HARTSTOKE, FRUITERERS LTD.,
Brentford Market, Middlesex.

Code: A.B.C., Fifth Edition.
Cables: "Hartstoke, Brentford, Middlesex."

cross between a Cape Gooseberry and a Cherry Tomato—the agricultural journal published a colored plate of the fruit submitted, but lacked the novel description applied to our very old acquaintance, the pink Cape Gooseberry (Physalis). The exhibition brought to light another special cross between a Banana and a Passion Fruit (how the cross was effected was not mentioned, nor whether the fruit was produced on trees or Banana stalks. Had Tacsonia mollissima been attached to it, much publicity of journalistic credulity may have been avoided.

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

Fifty bushels of first-class Oranges were picked from one tree in Queensland this season.

While bud selection is very important, insufficient attention is being paid to stock selection, states our Queensland correspondent in his article.

The apathy of the growers towards the fighting of the fruit fly and Banana bunchy top, is commented on by our Queensland correspondent.

Queensland has sent an entomologist to Java to obtain parasites of the weevil borer, and to bring back new varieties of fruit.

Banana Growing in Southern Queensland

(By "Cudgeree.")

OF ALL FRUITS GROWN, the Banana needs the least skill and the least preliminary outlay in its cultivation. This assertion holds good until the plantation reaches its fourth year, when it has to be abandoned, as it is no longer worth the labor of keeping free from weeds.

Most of the plantations, or "patches" as they are more correctly called, consist of areas rarely in excess of ten acres, leased from owners of virgin "scrub" land, land originally selected for the timber growing in the gorges of the Coastal Ranges, and from which all mill timber has long since been cut out.

These areas are leased for three year terms, usually rent free for the first year, and at prices ranging from £1 to £8 per acre per annum.

The bulk of the growers are young men, expert with the axe, the hoe, or the cane-knife, who had previously wandered up and down the coast, either felling scrub for dairymen, or cane-cutting for the sugar mills.

With very few exceptions, the balance of growers are also dairying, and attend to their Bananas "between milkings," turning their "patches" into grass land after the third season.

When the Banana boom started some years back, the notion existed, that "Bananas" were like Citrus or Apples, and would be a permanency, and extraordinarily high prices were paid for small areas of standing scrub, and in many cases heavy liabilities were incurred in the way of dwellings, etc., erected.

The Department of Agriculture had no information to give on the subject, so that those who pioneered this fruit in Southern Queensland, had nothing to guide them.

The result following the removal of the dense scrub from the mountain gorges (the only situation free from frost) in a rainfall of five (5) feet annually, can be easily imagined, as may be the natural failure of the plant to exist when all the available soil had been washed away.

Hence it is, that a whole mountainside may to-day, be covered with profitable Banana patches, in three years it is but a scene of desolation, land slides, and weeds.

From this it is evident that it is only a matter of time, for Southern Queensland to be completely denuded of its Banana land.

There is no lack of virgin scrub, further inland, but the Cavendish will not thrive if grown too far from the salt air from the coast, nor can it stand the greater degree of cold, back from the coast.

No one has yet succeeded in raising Cavendish on properly cultivated land, and the reason is one that seems to be beyond even the scientist.

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

"YARRA"
BRAND
SPRAYS
PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street / 155 Yarra Street } Abbotsford, Vic.
Tasmanian Agents—
M. L. HOPKINS, HOBART

Probably the Banana is too gross a feeder for any soil other than these scrubs, where lies the accumulated humus of centuries, and no known system of artificial fertilising meets requirements.

Raising the Crop.

The raising of a Banana crop begins with the scrub falling in winter. This job finished, the grower gets work cane-cutting elsewhere, or fits himself into any odd job for a living whilst his "falling" is drying up.

October, or even earlier if seasonal factors have been favourable, sees the whole coast line smothered for days with dense smoke from the burning off of these hundreds of acres of fallen scrub.

December finds the grower planting his area with "suckers" or bits of old corm carrying the virile "eye," which, within 18 months will have produced its plant and matured bunch, when it immediately dies (if not cut down). The planting is done with a mattock, the little holes being dug in lines, among the wilderness of stumps, logs, and roots that encumber the ground.

Then for the next 12 to 18 months the hoe is kept going without ceasing, in the fight against the rampant growth of weeds, which, if neglected for a month, would permanently injure the prospects of a good return.

These young workers, meanwhile, have been camping in any sort of a "shack," working hard, living well and building up a constitution, proof against anything.

Eighteen months from beginning operations, when they had to ask the local store to "stand to them" for rations, these chaps are banking from

£20 to £100 each week.

They invest in a car, and reap to the fullest the reward for their industry. Most of them wisely invest in fresh areas of suitable land on which to operate when the "lease" peters out, and so get a good start in life.

It is difficult to estimate the area under Bananas in Southern Queensland, as each year sees just about as many acres going out of cultivation as coming in.

Bananas may be cut every week through the year, which is strange, considering that the whole patch is planted at once. Of course, the quantities available vary according to the time of year.

The main crop

comes out during the summer months, and these bunches may take even five months to mature, but even then they do not all mature at once (except in the case of the winter bunches, which naturally mature rapidly as soon as the hot weather comes along.

For many years disease was unknown in Bananas, but unhappily we have now three "diseases," either of which may (or may not) completely blot out an industry that is worth fully a million to Queensland.

A Million Bushels Exported.

Last year we exported over 700,000 cases to the South, or over a million bushels.

It may appear absurd to say, that everyone handling Bananas, gets more out of them than the grower, but I believe that it is correct.

Even though the grower makes possibly £1,000 out of his first cut, he has had to live for the best part of two years before selling a bunch. Then his cases cost 1/6, on an average; another 1/- for haulage to rails, and then freights, commission, and organisation levies piled up on top, and in three years time he has to start afresh.

Now that labor on Banana patches has been regulated by the A.W.U., it is doubtful whether many patches will last for even three years, as the cost of chipping, etc., can only be met out of top market prices, which are not obtainable for fruit grown on a patch three or five years old.

It may be said, with little fear of contradiction, that in Southern Queensland, the Banana is really only profitable when grown on virgin scrub land, and only one crop is marketed, as production costs thereafter, rise too rapidly. To be able to employ one assistant under the Award, the patch must yield £10 weekly for 52 weeks in the year, and I know of very very few patches over three years old that can do this.

Tasmanian Apples

Orders for Apples carefully handled and undertaken for all Overseas & Interstate Markets.

E. R. COTTIER & CO.
88 COLLINS STREET,
HOBART - - TASMANIA
Tel. add. "ERCOT," Hobart.
Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

The natural home

of the Banana is away north, in the tropics, where few white men would care to swing a hoe all day. So what the future holds for Bananas may be easily guessed.

PINUS INSIGNIS.
Seed 8/- per lb.
F. G. STIRLING,
Ivanhoe, Victoria.
'Phone: Ivanhoe 234.

MARKETING FRUIT IN ENGLAND.

American Observer's Impressions.

SPEAKING at a meeting of men interested in the fruit industry of U.S.A., Mr. Edwin Smith, marketing specialist for the United States Department of Commerce, gave some interesting sidelights on the marketing in England of fruit from overseas.

Buyers in England, said Mr. Smith, watched the packing very closely, and torn wrappers on fruit detracted from the value of the case. One case of badly packed fruit would sometimes lose a good customer for the whole shipment.

The Delicious Apple is not popular in Great Britain, except in Scotland. However, there was some improvement in demand for this variety in London last winter. To further the sale of Delicious Apples, it would be necessary to confine the shipments to Apples of medium size, as the British trade does not want the large sizes, Mr. Smith stated. For the ordinary sale of Jonathans and other varieties that are wanted on the English market, four Apples of the 163 size make a pound, and five of the 200 size make a pound. If Delicious Apples of the 125 and 138 sizes were taken and offered at so much an Apple there might be a chance to increase the sale of this variety.

The slow sale of Apples in England last winter was a puzzle to both English and American dealers. Habits of English wage earners apparently had something to do with this, and the money that might have gone for Apples was spent for luxuries and pleasure.

The Trade in Apples in December was exceedingly slow, but at Christmas time the demand became surprisingly brisk. South African fruit in flats or trays was put on the market to compete with American Apples. A few Jonathans arrived in England in October. They sold at 14/6 a box in November and 12/6 a box in December. There was no life to the Winesap market until the second week in March, when they sold for 14/6 to 16/- a box. The arrival of two ships with large supplies had the effect of lowering prices, and the market did not recover for the remainder of the season.

Some Russian Apples

were shipped from Petrograd in Soviet ships to Baltic ports. Most of these Apples were of Pearmain shape. The Russians are rather short of red varieties, but those they have shown a flashy red. The yellow Apples have

a high finish. The report had been current that new orchards were coming into bearing in Russia, but inquiry made by Mr. Smith revealed the fact that this was not so, and that the fruit was coming from old orchards which were being brought back to more efficient production.

Bartlett Pears are marketed over a remarkably long period of time in England; in fact, from July until March. French and Californian Pears

BRISBANE

F. B. BOLTON & Co.
ALBERT HOUSE,
BRISBANE.

Brokers and Selling Agents for
FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

We sell to wholesale Distributors only, and do not handle growers' consignments.
We act as Railway Freight Agents for growers' joint truck loadings, and secure lowest freight rates.
On Forward Sales of fresh fruit we act for sellers and collect cash in exchange for delivery order.

COVENT GARDEN,
LONDON
Ridley, Houlding
& CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.,
Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

are on the market in July. One of the innovations was the marketing in England of

Gas-treated Pears

in tins. They were put up by a shipper in California and contained 20 pounds to each package. These arrived in October of last year, and the condition was so excellent that the receiver considered putting some in cold storage until later in the winter. When asked his advice regarding such a course, Mr. Smith advised against it. However, some were placed in cold storage and put on the market early in February, and were then in very good condition. However, the price brought meant a loss to the holder of the fruit. Bartletts from South Africa were on the English market in March.

It is important to have Pears arrive in good condition in England, Mr. Smith said. This was plainly shown by the experience in England in December, 1926. The Winter Nelis Pears from the North-west offered in that month arrived too ripe, and the dealers lost on them.

This turned the trade against these Pears, and when later lots in good condition arrived there was no demand and the market was poor for the remainder of the season.

South Africa is marketing an increasing quantity of Pears in England in winter. The fruit is put up in small packages containing 20 Pears. As to whether American Winter Nelis Pears might be put up in small packages with profit is questionable, Mr. Smith said, but it would be an interesting experiment. In spite of the South African competition, there should still be a good market for American Pears in England in February.—"New York Packer."

"CLENSEL."

Insecticide and Fungicide.

As a combined spray against insect and fungoid pests, Concentrated Clensel is becoming popular. In the early stages of its introduction, Mr. Bruce Anderson handled the product, and the business of supplying this preparation is now in the hands of Clensel Pty. Ltd., 184 Queen-street, Melbourne, C.1. The company is in receipt of letters from all over Australia, speaking highly of Clensel as a combined insecticide and fungicide. Clensel was discovered by John Paterson, chemist, of Glasgow, Scotland, and the preparation is now favourably known throughout the British Empire and the United States. Great success has followed its use on the tea plantations of India, where fungoid diseases and insect pests are rampant. In addition to killing scale, aphis, and other such pests, Clensel has proved to be a useful ovicide against the codlin moth. In destroying the pests affecting citrus trees, Clensel has won a good reputation.

Original testimonials from practical growers throughout Australia and New Zealand, as well as other parts of the world, may be inspected at the office of the company.

SMITHCO FRICTION LIFT.

An interesting display at the forthcoming Royal Show will be that of the Smithco Friction Lift. This power lift can be attached to almost any make of tractor, and converts every implement on the farm into a power lift one.

Demonstrations of the lift, together with implements, will be shown at the Lightning Fruit Grader Co.'s stand, corner Brunton-avenue and Mitchell-street.

Fruit Shipments
United Kingdom
and the Continent
W. D. PEACOCK
& CO.
24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

TASMANIA
Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.
Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.
Correspondence Invited.
H. JONES & CO. LTD.,
HOBART

CANNED FRUIT PACKERS.

Progressive distributing London and Liverpool House employing 40 salesmen handling 200,000 cases canned fruits per year, desires closer direct connection with packers of canned fruits, possibility of considerable expansion if satisfactory. Splendid opportunity for ambitious canners. Box 34, Mather & Crowther Ltd., New Bridge-street, London, England.

Garden Brevities.

Plant Perennial Phlox.

PERENNIAL Phlox, on account of their beauty, hardiness, and free-flowering qualities, are of exceptional value, and should have a place in every garden. Where not already planted, it is advisable to get plants in as soon as possible this month, to ensure a good display this summer.

The best way to grow them is in beds or clumps, allowing about eighteen inches between each plant. They thrive best in a position which, while sunny, is sheltered from the hot afternoon sun and north winds.

Easily Grown Flowers for Sowing Now.

With a little care, any of the following flowers can be successfully grown by any amateur gardener, and sowings can safely be commenced in the open ground this month:—

Antirrhinum (Snapdragon).—Splendid for massing in beds or borders.

Aster (Crego Strain).—Beautiful Chrysanthemum-like flowers, unexcelled for bedding.

Centaurea (Imperialis).—The improved large-flowered Sweet Sultan.

Clarkia.—New double-flowering varieties, excellent for massing.

Larkspur (Rosy Scarlet).—Blooms are produced on long, graceful spikes, and are of exceptional value for cutting.

Marigold (Dwarf African, Orange Prince).—Very effective with large showy flowers.

Marigold (Giant Tree, French).—One of the most prolific of summer-flowering annuals. Requires plenty of space. Grows 6 to 8 feet high.

Phlox (Grandiflora).—Unsurpassed for massed effects.

Petunia (Rosy Morn).—Free-flowering, specially valuable for bedding.

Poppy, Shirley (Rev. Wilks' Strain).—Very showy. Blooms profusely and continuously.

Sunflower (Miniature).—Free-flowering and hardy.

Salpiglossis (Emperor).—Richly veined flowers of great value on borders.

Zinnia (Giant Dahlia-flowered).—A brilliant class of annual, excellent for massing in beds or borders.

* * * * *

Reliable Varieties of Vegetables for Sowing This Month.

The following varieties should ensure quick-maturing crops, and large sowings can now be commenced:—

Beet (Crimson Globe and Lucullus or Silver); **Carrot** (Early Scarlet Horn and James' Intermediate); **Parsnip** (Hollow Crown); **Cabbage** (Early Allhead); **French Beans** (Early Pale Dun); **Lettuce** (Continuity, Hanson, and Drumhead); **Turnip** (Orange Jelly and White Stone); **Radish** (Crimson Giant Forcing and Icicle); **Peas** (Green Feast and Yorkshire Hero); **Onions** (Brown Spanish, Silverskin, for pickling, and Spring); **Leek** (Lyon); **Parsley** (Triple Curled); **Mustard, Cress,** and **Potatoes** (Manistee and Carman).

The sowing of **Cucumbers, Melons, Pumpkins,** and **Marrows** outdoors in warm situations is best left until the beginning of next month.

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England, the Continent and New Zealand.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

MANCHESTER

(40 Miles Inland)

Is the Nearest Deep-water Port to BIRMINGHAM, BRADFORD, COVENTRY, HALIFAX, HUDDERSFIELD, LEEDS, LEICESTER, NOTTINGHAM, SHEFFIELD, STOKE, and over 200 cities and towns in England's greatest industrial area.

The Bulk of Australian Fruit Is Landed in London

yet the population of the North and Midlands is greater by some millions than that of the South of England.

GROWERS AND EXPORTERS PAY THE BILL!

For Handling and Transport Charges and Deterioration of fruit despatched from London to the North for re-sale.

Official records of prices prove

There is no Better Market than MANCHESTER

and the Port, Dock, Sale Room and Forwarding facilities are

SECOND TO NONE.

Ensure Minimum Charges and Maximum Results

By Direct Shipment to Manchester Docks.

Address enquiries as to opportunities for direct trade to:—

W. J. WADE, Representative of the Manchester Ship Canal Company

8 BRIDGE STREET, SYDNEY, N.S.W.

Cables and Telegrams:— "Portoman," Sydney.

NITROGENOUS FERTILISERS.

We acknowledge with thanks the receipt of a very excellent and well-prepared letter head folder by the Australian Sulphate of Ammonia Propaganda Committee.

The inside of this folder is entitled "No Mere Theory," and contains an excellent illustration of an Orange tree in natural colours, together with views of deciduous and vine fruits.

The pamphlet states that the steady increased consumption of sulphate of ammonia from year to year, proves the value of same to tree or vine. Healthier and sturdier trees carrying better fruit are produced. One man, who is reputed to own the most productive orchard in the Commonwealth, maintains that sulphate nitrogen is an absolute necessity, and uses 2cwt. of sulphate of ammonia per acre every year.

Apply in Early Spring.

Early spring is the time to apply sulphate of ammonia, when the trees or vines are beginning to shoot. That is when they can most profitably assimilate it, but here is one of its principal advantages: You can delay the application of sulphate of ammonia for six weeks to two months after you have made your general fertiliser application—that is, of course, if the right conditions of moisture are available. Those who have a water supply at hand can easily do this. The solubility of sulphate of ammonia enables it to make what can best be described as "a short cut" to the tree and its crop.

INCREASED RICE PRODUCTION IN COCHIN-CHINA.

Production of cleaned Rice in Cochin-China is 3,289,209,000 pounds, according to a cable from the International Institute of Agriculture at Rome. In 1926, Cochin-China produced 3,049,278,000 pounds of cleaned Rice, or 37 per cent. of the total crop in Indo-China of 8,275,639,000 pounds. Production in 1925 was 2,708,103,000 pounds. The Rice area in Cochin-China in 1927 was 5,118,000 acres, as compared with 4,735,000 acres in 1926.

ON THE SAFE SIDE.

Motorist: "Will five shillings pay for your hen that I just ran over?"

Farmer: "Better make it ten bob. I have a rooster that thought a lot of that hen, and the shock might kill him, too."

CHINESE TOOK 64,000 BOXES OF CALIFORNIA ORANGES DURING 1927.

In a recent article in "Commerce Reports" on "Far Eastern Foreign Trade in Fresh Fruits," it was stated that imports of fresh fruits into China during 1922 to 1926, averaging in value £680,000 annually, consisted principally of Oranges and Apples. Imports of Oranges totalled 422,000 boxes (value £270,000) a year, of which 361,000 boxes were from Japan and 31,000 from California.

In 1927, China, including Hong Kong, was the leading market of the Far East for United States Oranges, taking 64,000 boxes.

The report also states that over 95 per cent. of the Oranges exported from the United States to China enter that country by way of Shanghai. This is due primarily to the fact that Shanghai is served by shipping companies operating ships on definite schedule, equipped with refrigerator facilities for the transporting of perishables. Imports of Oranges from the United States is centered largely in the hands of a limited number of foreign and Chinese import houses, with whom some forty or more native Shanghai dealers place their orders. Many of these native dealers may be considered as more or less wholesalers inasmuch as they account for the distribution to smaller shops in Shanghai as well as to up-country and outport connections.

While orders for United States Oranges are placed by Shanghai importers throughout the year, the heaviest bookings are from late April or early May up to and through September. Shanghai importers usually order 200 Oranges to the box, which is the size the small Shanghai fruit shops find they can dispose of most easily and profitably. Around 90 per cent. of United States Oranges entering Shanghai run 200 to the box, only a limited quantity of larger sizes being imported for foreigners.

According to Chinese maritime Customs valuations, the average price per box of Oranges imported into Shanghai in 1927 from the United States was 25/- per box, from Japan 8/- per box.

SOUTH AFRICAN CITRUS SEASON.

Better Than Last Year.

This year the average quality of the Oranges is better than last years'. They are of a better colour, sweeter, and more juicy, though some slight waste has been visible in some of the shipments. Considering that Strawberries and other soft fruits are now in season, prices for Oranges are keeping up very well.

It is estimated that the quantity available and suitable for export to Great Britain and the Continent this year is about 800,000 cases, some 45,000 cases fewer than the total last year. There has been drought in some of the Orange-growing districts, but superior quality has more than made up for shortness of quantity.

There is a growing demand for South African Oranges on the Continent, particularly in Holland, which has some racial affinity with South Africa. Other ports used in the Continental trade are Bremen and Hamburg. While some of the fruit is reshipped from England, a fair proportion is shipped direct to the ports named.

Certain rumours which have reached South Africa from England (or is it from the United States?) says the "Imperial Food Journal," seem to have given growers and exporters an exaggerated idea of the extent and character of Californian competition. It has somehow got about that California intends to enlarge her British business by judiously marketing 25,000 cases of Oranges a week of the Sunkist brand.

There is a sort of magic in the word "Sunkist," for it wins for Californian fruit prices far higher than those obtained by the best South African fruit, quite as good in quality and condition. That is a genuine grievance, but the American citrus trade is a very fluctuating quantity. The Californian growers simply use the British market to steady their own, and this year they are not so formidable on this side as some of the scaremongers say.

With only moderate quantities of Californian Oranges coming along, and with Spanish Oranges soon dropping out altogether, there is good reason to believe that South African fruit will have such a season that growers will get fairly good returns.

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

SPAIN'S HUGE ORANGE PRODUCTION.

Spain, the largest exporter of Oranges in the world, shipped an average of 18,500,000 boxes (70 pounds each) a year in the period 1922 to 1926, as against 3,500,000 boxes from Italy and over 2,000,000 boxes from the United States. Palestine also sends to foreign markets in the neighborhood of 2,000,000 boxes, while Japan and South Africa are among the more important of the smaller exporters.

HAMBURG
(GERMANY).
Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

F. W. Vear
Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
MELBOURNE, VIC.
Highest Market Rates Assured
Prompt Settlements

Spain is the largest producer of Oranges in the world. Available statistics show that in the 1926-27 season total Spanish Orange production was the equivalent of about 34,000,000 United States boxes (70 pounds each) as against about 39,000,000 boxes in 1925-26. In addition, there were produced in 1926-27 the equivalent of 1,400,000 United States boxes (70 pounds each) of Mandarins, as against 1,250,000 boxes in 1925-26. (Spanish Orange cases average 110 pounds.)

In the past five years both Spanish and United States productions have at times reached an output of around 39,000,000 boxes (70 pounds each) and Italian production has been around 9,500,000 boxes. South Africa appears capable of producing over 2,000,000 boxes and Palestine approximately 2,000,000 boxes. These figures are for present known capacity and do not take into consideration increased yield, which may be expected from some countries as a result of the gradual coming into bearing of new plantings.

The United Kingdom is the principal market for Spanish Oranges, while France and Germany are practically tied for second place. The United Kingdom is also the principal market for Spanish exports of Grapes, taking 1,200,000 barrels (60 per cent.) a year from 1924 to 1926, of total exports of 2,000,000 barrels. The United Kingdom and France are the principal markets for Spanish exports of fresh fruit other than Oranges and Grapes.—"California Fruit News."

BRAZIL DEVELOPS CITRUS INDUSTRY.

Recent reports from Brazil indicate that there has been a revival of the fruit industry in that fertile country.

Orange-growing is being specialised. It will be remembered that the original Washington Navel Orange tree came from Babia, Brazil. From the tree planted at Riverside, California, the whole of the Washington Navel Orange industry of the world has sprung.

"U.S.A. CITRUS OBSERVATIONS."

"Spray Irrigation" Advocated.

(To the Editor, "Fruit World.")

Sir,—In your issue of August 1 you publish an article by Mr. Clifton Rees, entitled "Some Observations on the Citrus Industry of California." Amongst other things, he says: "One of the chief benefits to be derived from the growing of crops under irrigation in semi-arid regions, is that soil moisture can be kept under control, yet this fact is lost sight of, and instead of controlling soil moisture it controls us."

And again: "It is far more important in citriculture to investigate underground conditions, rather than by watching the tree above the ground. The economic loss suffered by the fall of Oranges in the spring, is largely the result of faulty irrigation practice, and will only be rectified by a change in practice."

I am sure there are many others like myself who would like to know what his ideas are as to "a change in practice." In nearly all our irrigation settlements water is distributed by means of furrow irrigation, and it is well known that the trees at the start or head of the furrows necessarily get a much greater proportion of the water than those at the ends of the furrows. And further, water is with small exception, supplied according to roster, and a grower has to choose between taking water at an unfavorable time, or omitting a periodic watering. In these circumstances a grower hasn't much chance to control the soil moisture, the extent of which may readily be ascertained by using soil tubes.

For the reasons stated, I have long held the opinion that "a change of practice" is absolutely essential, alike for Citrus or any other variety of fruits to gain maximum results and retain healthy and vigorous growth. My remedy for this would be to

instal "spray irrigation"

on every holding, each owner having his own pump and electric motor that he could use at will. With a proper system of sprays, water can be dis-

Established 1896.
Cooksley & Co.
Fruit Agents.
Fruit Exchange, Brisbane
Consign to the Agents with years of experience, who guarantee Fruitgrowers the best of Attention and Satisfaction.
Selected Tasmanian and Victorian Representatives.
Reference: Commercial Banking Coy., of Sydney,
Bank of Victoria.
Shipping and Railing, No. 29.

GENUINE
"Black Leaf 40"
IN
10lb. & 2lb. tins
DISTRIBUTORS
The PRODUCERS' DISTRIBUTING Society Limited.
SYDNEY and MELBOURNE

tributed with absolute uniformity, and in such volume as soil conditions demand. There are very few growers who would not prefer an inch or two of steady rain to ordinary irrigation, and when that condition can be produced mechanically, I wonder that it is not more generally applied.

Of course, the objection is first cost of installation, but if the position is analysed, it will be seen that it results in the use of about 1-4th of 1-5th of the water resulting from the present practice with infinitely more beneficial results in distribution and volume. To save that amount of water is an immense economy, especially where the water is raised by pumping, and opens the way to use the same volume of water in irrigating four or five times the area. It also saves all the labor of ploughing out and closing in the irrigating furrows, and owing to the evenness of distribution, makes evenness of cultivation certain, especially if the watering is arranged in successive sections of the block operated. Also there is no land wasted for head ditches, and consequently the laborious work of upkeep is avoided.

My ideal would be to let every settler have his own direct coupled centrifugal pump; in community settlements on the bank of the supply channel; actuated electrically from the mains of the State Electricity Commission wherever such can be made available. The grower's labor would be very much reduced, and the soil moisture would be controlled, and at the same time a very effective remedy provided to combat frosts.—Yours, etc.,

GEORGE H. TOLLEY.

Melbourne, 10/8/28.

VICTORIAN CENTRAL CITRUS ASSOCIATION.

Melbourne Representative Appointed.

Mr. Kitchin-Kerr, of Redcliffs, has been appointed Market Representative in Melbourne of the Victorian Central Citrus Association, Murray Citrus Growers' Co-op. Association, and New South Wales Central Citrus Association, in succession to Mr. W. E. Branson, who resigned on account of ill-health.

Mr. Kitchin-Kerr is a returned soldier, a member of the Australian Journalists' Association, director of the Redcliffs Co-operative Packing Company, member of the Australian Dried Fruits Federal Council, and President of the Redcliffs branch of the Victorian Central Citrus Association. He has a citrus grove and dried fruits orchard at Redcliffs.

Laborious Cherry Facing

reduced to a minimum by the use of the

"Pacemaker" Mask

Facing four cases easier than facing one, and the whole "get up" of the fruit much more attractive. The patentees designed the "mask" for their own use, but cherry growers have been so keen about it that it is being distributed Commercially.

Excellent for gooseberries and other small fruits.

Virginia Hygienic Orchard Coy.

P.O. Box 5. Young, N.S.W.

GOODMAN'S

Experts on FRUIT TREES

Only knowledge gained through many years experience, could make Goodman's Fruit Trees so famous. Sturdy growth, and splendid bearing of finest fruit under all climatic conditions are the features that increase the sales of Goodman Trees every year.

FREE CATALOGUE

Sets out many useful hints to growers regarding planting, pruning, varieties, prices, etc.

Write for your copy now.

C. J. GOODMAN

Picnic Point Nurseries

BAIRNSDALE - BOX 47 - VIC.

(W.McF)

Melbourne City Council

BLOOD FERTILIZER

. . . or . . .

Concentrated Manure

Manufactured from Animal Refuse at Desiccating Works, City Abattoirs, Flemington.

This organic manure may be used in its original manufactured form or as a basis for mixed fertiliser.

Analysis—Nitrogen, 8.02 per cent.
Phosphoric Acid, 1.25 per cent.
Potash, .61 per cent.

Price:—£8 per ton, Spencer-street Railway Station, or Melbourne Wharf; £7/15/- per ton at works; £7/5/- per ton in purchasers' bags at works.

POULTRY MEAL.

Price:—17/6 per cwt.

Orders—to be forwarded to Superintendent, City Abattoirs, Smithfield-road, Flemington, W.1.

Descriptive Pamphlets may be obtained on application.

W. V. McCALL.
Town Clerk.

FIGHTING INSECT PESTS IN THE ORCHARD.

Apple Mussel, San Jose, and Other Scales.

Spray with lime sulphur or red oil in winter. Nicotine sulphate or black-leaf 40 in summer. Burn all prunings.

Apple Root Borer.

These insects are now commencing to come up from the roots of Apple and other fruit trees. Place zinc bands and traps on trees. Keep orchards free from weeds, and spray with arsenate of lead.

Codlin Moth.

Pamphlets on the codlin moth and treatment against same can be obtained free of cost on application to Mr. French, Government Entomologist, Department of Agriculture, Melbourne.

Pear Root Aphids.

These insects are becoming very numerous in Pear orchards in many parts of Victoria. It is a small, dark aphid, covered with a white cottony material, and greatly resembling the woolly aphis, but attacks only Pear roots.

Control.—Eliminate young stunted trees and replant healthy ones. The Japanese Pear stock (Pyrus Calleryana) is much more resistant to this pest than the French seedling stocks. Remove soil to a depth of 6 inches around tree, and spread Paradichlorbenzine (P.D.B.) about roots. Cover over immediately with soil. Stamp it firmly down.

Black Peach Aphids and Green Peach Aphids.

There are two species of aphids which attack the Peach. They first appear when the buds are beginning to swell. They breed very rapidly. When trees are dormant, spray with lime sulphur or red oil. When leaves are on, spray with nicotine sulphate or black-leaf 40.

Bryobia Mite.

These mites were exceedingly numerous last fruit season, and their reddish-coloured eggs are to be seen on the twigs of Apple and other fruit trees. As a winter spray, use red oil or lime sulphur. In summer use tobacco water, nicotine sulphate, benzole emulsion, or black-leaf 40.

Cherry Borer Moth.

The caterpillars of these moths are very destructive to Cherry, Plum and other trees. The grub bores within the limbs. They are greyish, and each segment has a number of pinkish spots. The moth itself measures from an inch and a half to two inches across the expanded wings; the front wings are white, each with a small dark spot; the hind wings are creamy white.

Dip piece of rag into bisulphide of carbon and place same in tunnel made by caterpillar. Close opening to tunnel immediately with clay or soap to prevent fumes from escaping.

Woolly Aphis Parasite (Aphelinus).

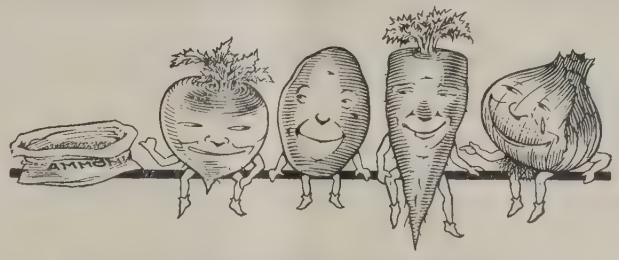
These parasites will soon be emerging. Place the twigs containing the parasites into orchards affected with woolly aphis. These twigs can be obtained on application to the Orchard Supervisors of the Department of Agriculture.

San Jose, Apple Mussel, Olive and Other Scales.

The young scales are now hatching. Spray with nicotine sulphate or black-leaf 40.

Mottled Cup Moth.

The greenish larva of these moths are quite common this season on Apple trees. They often destroy the fruit spurs. The larvae have greenish and red spines; these, if touched, produce a severe irritating feeling on the hands. Spray with arsenate of lead, 1 in 25.



They Seem to Smile and Show their Gratitude

Withhold Nitrogen from your crops, and they languish. A poet could easily imagine that they scowl, while there are some scientists who would tell you that plants deprived of their Nitrogen become peevish and sulky. At any rate, they don't grow as well as they should. Give them SULPHATE OF AMMONIA (that's the best way to apply Nitrogen to all plant life) and they seem to smile and show their gratitude. They fill out, they look healthier, and because of the improved quality of the crops they bear, they can't help earning for you a greater profit per acre. Plants, like human beings, *do* show appreciation of proper treatment. Give *your* plants what they *need* for their profitable development. Give them Sulphate of Ammonia . . . in its improved condition, dry, free-running, and non-caking.

THE METROPOLITAN GAS COMPANY,
196 Flinders Street, Melbourne.

SA 9/28

WHO CARES?

A would-be soap box orator who had reached the argumentative stage sat down next to a clergyman in a street car. Wishing to start something, he turned to the clergyman and said:

"I won't go to heaven, for there ain't no heaven."

The expected rise was not forthcoming.

"I say there ain't no heaven. I ain't goin' to heaven," he shouted.

The clergyman replied quietly, "Well, go to hell then, but be quiet about it."

PAPER MULCH INCREASES CROPS.

Astonishing Developments.

Weeding Eliminated : Crops Increased 500 Per Cent.

FARMING UNDER PAPER is something new under the sun. The new plan is the acme of simplicity. You merely unroll a strip of black asphalt paper across the land to be planted. The edge of this strip marks the row. When the seed has been put into the ground, another strip is unrolled right alongside. The young plants come up along the line between the two paper strips. If you are setting Cabbage or Tomatoes, or other things of this type, the plants are set in holes cut through the paper. (Thus states a writer in the "Country Gentleman"), and continues thus:—

Weeds are kept down. Moisture is kept in. The soil is kept warm at night, and because of the absorptive power of the black paper, the soil becomes warm early in the season. The result is that crops mature earlier and the yield climbs up from 50 to 400 per cent. increase. By this method of under-paper farming, crops heretofore sharply limited to southern latitudes are made to grow successfully hundreds of miles farther north. The Alaska settler using this paper mulch can produce in his home garden practically all the vegetable delicacies enjoyed in the States. England and Scotland are planning now to grow their Tomatoes in the open under paper.

With his very short season, the Britisher has had to use glass to mature Tomatoes. At Arlington, Virginia, growing under paper mulch, cotton produced 1,150 pounds of seed cotton to the acre! Arlington is 200 miles north of the cotton belt.

The new paper farming had its inception in the sugar and Pineapple fields of Hawaii. On these slow-maturing, high-acre-value crops the plan has been found to have abundant economic justification. A Pineapple planting takes three years to produce ripe fruits, and it is approximately twenty months between sugar-cane cuttings.

In a rampant tropical climate, keeping down weeds over this long period is no small task. Sometimes long rainy spells allow weed growth to get the upper hand, despite all that can be done. Under the paper-mulch plan, growers found that not only were weeds completely eliminated all the time, but that the crop yield, weeds or no weeds, was materially boosted where the paper stripping supplanted the plough and hoe. **It is estimated that 90 per cent. of the Hawaiian Pineapple crop is now grown under the paper-stripping plan.**

Four years' experimental work has brought out facts which deserve the widest consideration.

One principle seemingly running through all the results is that the difference between the yield of mulched and ordinarily cultivated crops varied most widely when plantings were made on soil of the poorer quality. The difference, however, even on rich and medium soils shows a tremendous yield boost. Broadly speaking, the paper mulch, even on good soil,

has doubled the yield

over that of ordinary cultivation treatment. This means that the family garden, grown under paper mulch, would need to be only half the normal size.

In the Arlington Farm (U.S.A.) tests this past season, green corn grown under paper mulch yielded 297 per cent. increase over the normal cultivation area. The increase for Spinach was 516 per cent. Summer Turnips gained over 200 per cent.; Lettuce 133 per cent. Sweet Potatoes grown under the paper mulch made more than double yield, as compared to the usual cultivation treatment. The yield of Celery and Cabbage almost doubled when grown under the paper treatment. Tomatoes made 40 per cent. more. Beets made more than double yield.

New Potatoes, Watermelons, Green Corn, Egg Plant, Cucumbers, Cantaloupes, Beans, responded with increased yields up to five times the amount grown under ordinary cultivation.

The only crop adversely affected was Peanuts, the yield dropping down nearly one-half under the mulch treatment. The peculiar growth habit of the Peanut, however, makes the loss easy to understand. The paper mulch prevented the normal "pegging" of the Peanut plant.

Each season of the tests the same astounding range of yield boosts has resulted. Each year the experiments have attracted wider attention. The study really was begun in an effort to find out what goes on in ground covered by this paper stripping. The Hawaii development, with the tremendously increased yield of Pineapples and sugar-canes grown under the mulch treatment, flaunted a tantalising mystery in the face of the staff of the U.S.A. Biophysical Division of the Department of Agriculture.

Dr. Flint was assigned the job of finding out

Nobelius' Fruit Trees

Known All Over Australia

for their

Strong, Healthy Growth

We have a particularly fine stock

of

Apple Trees

including the following:—

DELICIOUS	ROME BEAUTY
JONATHAN	DEMOCRAT
KING DAVID	DUNN'S
STAYMAN	GRANNY SMITH
WINESAP	CLEOPATRA
GRAVENSTEIN	ROKEWOOD
YATES	FIVE CROWN

GLENGYLE, Etc.

Write for 1928 Catalogue of Fruit Trees, Ornamental, and other trees.

C. A. Nobelius & Sons Pty. Ltd.

Gembrook Nurseries,

Emerald, Victoria.

Telephone: Box Hill 154.

the biophysical changes going on under the paper covering. Nobody had an idea that the practice of growing crops on paper-covered ground might have any very direct bread-and-butter importance under our conditions. But everybody wanted to know why and how the paper covering acted to boost yields in Hawaii. When the experiments had got well under way, however, it became apparent that the thing going on underground was of secondary importance. The amazing thing and the thing of immediate practical importance, happened uniformly above ground.

The biophysical study of underground factors involved is being carried forward just as planned. Such a study, however, is academic. It is pure science in nature, and may or may not result in anything of practical value. The mere empirical discovery, however, that 50 to 500 per cent. may be added to the growth of plants by mulching the ground with asphalt paper has bounded up, Jack-in-the-box fashion, to the amazement, if not confusion, of the experimenter bent on attacking a long complicated study of abstruce biophysical factors. It is as though a hunter out for rabbits had flushed big game.

Ordinary tarred paper has not given satisfaction as a mulching material. Apparently it is important that asphalt be used in making the paper. The asphalt paper is manufactured in California.

Garden pests abroad

Scale Insects, Powdery Mildew, Red Spider, Woolly Aphis, Peach Leaf Curler, Black Cherry Aphis, etc.

—Look to your fruit!

Paterson's Concentrated

"CLENSEL"

is the

Only Combined Insecticide and Fungicide

"Clensel" will destroy all garden pests, and can be sprayed at any time **(NO OTHER SOLUTIONS REQUIRED)**, even when trees are in bloom or in fruit, as it is absolutely **NON-POISONOUS** and **NON-INJURIOUS.**

"Clensel" is not a new product that you need feel sceptical about. It has been used extensively in Britain and India for years, and now prominent Orchardists here, who have thoroughly tested it, say that **"Clensel" is what they've been waiting for.**

Literature on Application.

CLENSEL PTY. LTD. **184-6 Queen Street, Melbourne C 1**

Central 2654.

Fruits for the Home Garden.

Helpful Seasonable Hints.

THE ADDITION of a few fruit trees in the garden is always a source of pleasure and interest to the amateur gardener. I would not recommend the planting of Apples and Pears, unless one has a large garden and can attend to the various sprayings which must be done.

The first tree I would plant would be an **Almond.** In the first place because an Almond tree in full flower is indeed a picture, and secondly, the fruit from it is so useful in the kitchen, and for dessert. It is advisable to

plant two for cross-pollination

purposes. I would suggest Brande's Jordan and I.X.L. It is not necessary to plant them close together.

When pruning it is only necessary to remove badly placed branches, and thin wood, remembering they always fruit on wood formed the year before.

The **Apricot** again, when in flower, is a thing of beauty. They are very hardy, and once they come into bearing can be relied on for fruiting. It is advisable to

prune in summer,

in fact, this applies to all soft fruits. Moorpark is one of the best varieties.

The **Peach** and **Nectarine**, too, are beautiful in flower, they thrive practically anywhere, they do not require too rich a soil, otherwise they make too much growth. There are several varieties. For eating, in the order of ripening, Brigg's Red May, Royal George, and Wilson's Peach; **cooking**, Tuscan King, Elberta, and Pullar's Cling.

In **Plums** again, we have great variety, the Red Cherry Plum planted in conjunction with Prunus pissardii (the Purple-leafed Plum), will ensure heavy crops on both. Angelina Burdett, a blue Plum, is good for preserving and eating. Grand Duke, another blue Plum, is later, and so forms a succession; with the Japanese Plums, Burbank will take some beating; the flavor is good, and it is a reliable cropper.

In a damp corner a **Fig** tree, providing it gets plenty of sun, will well repay for the room it takes up, the main thing is to keep good strong short jointed wood, and do not overcrowd the shoots. Brown Turkey is a good variety.

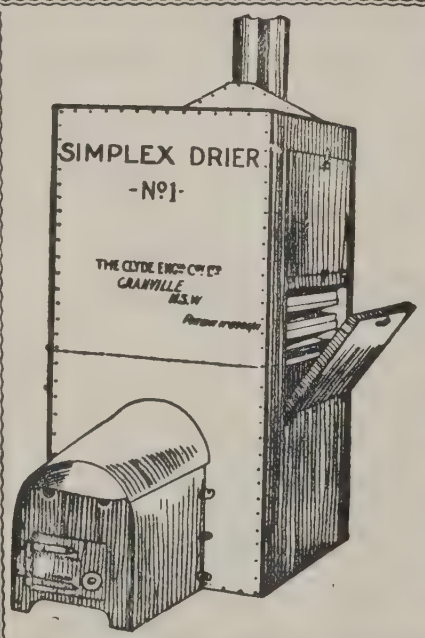
In **Citrus** trees, the Lemon takes pride of place, and no garden is complete without one. They thrive practically anywhere, but if sheltered from the north it is an advantage. Do not plant too deeply, and see that they are well drained, they revel in copious supplies of water during the summer months, but it must not be allowed to stand, do not dig round the trees too deep as they are surface rooting.

Lemons do not require much attention, keeping them in shape and taking out any badly placed branches, and weak wood is all they require. Take care to

procure acclimatised plants,

as these can be transplanted without much trouble. I prefer the variety Eureka, with me it has proved the most satisfactory.

The **Orange** again, if only grown for its flowers, would repay its place in the home garden. The treatment accorded the Lemon, will meet the requirements of the Orange. The Washington Navel is one of the best it has beautiful foliage, compact growth, and flowers abundantly.—E. F. Cook, E. Malvern, Vic.



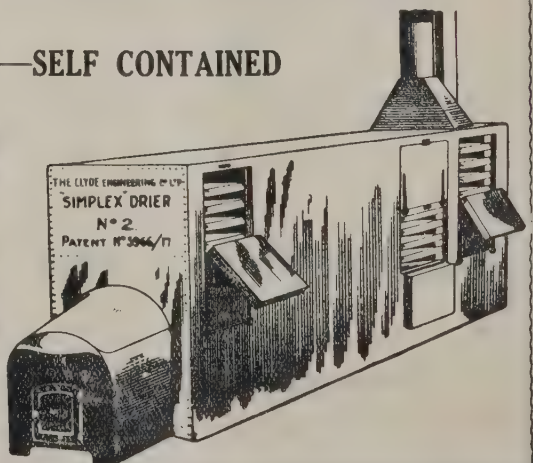
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ld.
GRANVILLE, N.S.W.

Subsoiling for Better Crops

Every Grower knows the value of Subsoiling. By its use the production of Arid Lands and worn-out Plantations is increased

Subsoiling at the Research Farm, Werribee, Victoria

Perfect Regulation of Depth Obtained

Filled with steel beam, strong and high, with adjustable handles.

The heel is adjustable to give the desired suction.

An excellent medium for loosening the subsoil.

It can be used with three or four horses, and a guage shoe controls the depth.

SHOW VISITORS

Our Stand at the Royal Show is

13 PLUMMER AVENUE

We will be pleased to see you

The "HARVEY-DELANY" GRADER

PERFECT GRADING - NO BRUISING

GRADES INTO EIGHT SIZES

Progressive Orchardists will find that it pays to instal the "Harvey-Delany" Grader, because it is built on lines for efficiency and long service, and is just the machine for the grower who wishes to cut down labour costs.

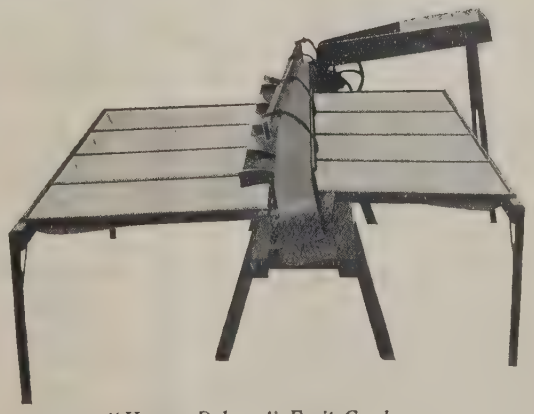
The Labour Saving alone will more than Pay for it the First Season

There is nothing to get out of order, and is o simple that a child can operate it.

The Machine with the ONE moving element.

This Grader is built for EFFICIENCY and DURABILITY at a PRICE to suit every grower

WRITE FOR PARTICULARS



"Harvey-Delany" Fruit Grader

To . . .

D. HARVEY,

ORCHARD IMPLEMENT MANUFACTURER
BOX HILL, E.11, VICTORIA, AUSTRALIA

Show Rooms: 440 ELIZABETH ST., MELBOURNE Agents all States

The Stationary Spray Plant.

Success in U.S.A. and New Zealand.

(By R. E. Boardman)

SURPRISE is frequently expressed that the stationary spray plant system has not been more largely adopted in Australia. The stationary spray plant is now an established portion of the equipment on many orchards on the Pacific north-west coast of U.S.A. When at Wenatchee, in the State of Washington, U.S.A., I had the pleasure of being shown over that district by Mr. W. A. Luce, a Government Horticulturist, and Mr. H. C. Diehl, Plant Physiologist of the U.S.A. Department of Agriculture. In company with Mr. Diehl, I obtained much valuable information relative to the doings of the co-operative and other fruit handling companies at Wenatchee, and was also privileged to see some of the scientific work on cold storage which is under Mr. Diehl's charge. Travelling among the orchards in company with Mr. Luce many interesting features were noted, not the least of which being the stationary spray plant system, which has been adopted by now over 75 per cent. of orchards in that fertile valley, where 12,000 acres are under fruit.

It may be of interest to state here that Washington is the biggest boxed-Apple producing section of the United States, and it is the boxed-Apple fruit from Washington as well as from Oregon, which is on the English market when the Australian fruit arrives.

The following is a short description of the stationary spray plant in a a Bulletin issued by the State College of Washington.

Popular in U.S.A.

In a bulletin issued by the State College of Washington, U.S.A., on the stationary spray plant, there is much that should interest the orchardists of Australia.

The stationary system, which has become so popular among orchardists of the eastern States of U.S.A., has been proved to have many advantages over the portable spray pump method. Pipes are laid through the orchard which are connected up with a tank containing the spray mixture. Motor or tractor power is used for forcing the mixture through the pipes, and the whole orchard is sprayed in a very short time.

The rapidity with which the stationary spray plant is being taken up by orchardists in the Apple country may be judged by the sales of a dealer in the city of Wenatchee. This dealer sold 325 stationary plants as against 18 portable plants, in one year. Of the stationary outfits, 270 were electrically driven.

The sales manager for the Puget Sound Power and Light Company, reported having disposed of 288 new plants during 1926, and it is estimated that out of 2,500 Apple growers in the Wenatchee Valley, half the number were using stationary plants.

Construction.

The principle involved in the construction of the stationary spray plant is in no way different from that of the portable. The essential differences are purely mechanical. The outfit is mounted on a permanent base, the mixing tank is much larger, and the spray material is carried away from the pump through an iron pipe instead of through hose.

A popular tank in use is made of concrete and is the most economical. A tank, 54 inches wide, 72 inches long, and 65 inches deep will hold 1,000 gallons. The tank must be reinforced in order that there should be no chance of settling.

Pumps.

The pumps in use are:—Bean, Hardie, Meyers, Friend, and Ward-Love. All these pumps are of reciprocating type, multiple-cylinder, and single acting. The three-cylinder pump gives a fairly constant pressure, but not so smooth as the four cylinder. No pressure charts were made to prove the foregoing statement, but observation was made on the pressure gauge. The more cylinders there are, the less perceptible the disturbance when a valve fails to operate properly.

Power.

Electric motors deliver the smoothest power, and are probably more economical in the long run than any other kind of power. Electricity is not available at all orchards, but where some other form of power is necessary, the four-cylinder engine appears to give the best results. There are several methods of connecting the power to the pumps. One of the simplest and probably the cheapest, is by means of pulleys and belt, but this method is employed only where the power machine is used for other purposes when not driving the spray pump. The tractor was the only type of power which was belted to the pump on the 60 plants studied.

One of the things that has been very noticable this year, is the size of equipment. Very few plants are installed with 5 h.p. motors. During this season, 7½ h.p. motors are used on five to ten acre blocks, and 10 to 15 h.p. motion on 20 acre blocks and upwards.

96% AIR 4% KEROSENE

EFFICIENCY IN LIGHTING

100 Candle Power Light for 8 Hours from 1 Pint of Kerosene.

BY

THE NEW IRONCLAD LAMP

Made in England.

The Best Lamp in Australia. Pays for Itself.
Old Lamps Converted to the Titus. 150 c.p. Lamp.
Allowance Made on Old Lamps as Part Payment for New Ones.

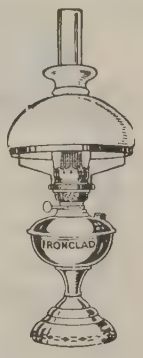


Table and Hanging Lamp, handsomely finished in Oxidised Copper or Nickel Plate. Catalogue free. Phone 6645.

THE EDGELL SPRAY PISTOL,

Fitted with the Improved Small Jet.
The most economical Sprayer ever invented. Saves ½ cwt. arsenate of lead in a week's spraying. One man can do the work of two with the Edgell.
Every user testifies to the above facts.
Also, the **Mason Automatic, at 25/-.**

T. W. SANDS, The Melbourne Lamp House

Agent for Knight Light Air Gas Plants and all Accessories.

372 Lonsdale Street, Melbourne

It has been noticeable that pump manufacturers had this year, materially strengthened the pumps. Pressure on these plants is maintained at from 350 to 500 pounds per square inch, and the pressure is regulated by means of a specially designed relief valve.

Piping the Orchard.

No standard method or plan has been adopted for piping the orchard. Several factors enter which may vary considerably, with different orchards. The shape of the block, spacing of trees, location of plant, etc. In general, there are two systems in use, namely, the return, and the dead-end.

SULCAR
CARBONISED SULPHUR
Spraying Mixture.
THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED
DOES NOT BURN.
Manufactured by
SINCLARE & Co.
BOX 3. KING ST. P.O.-SYDNEY.
(Works,-Alexandria)

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of G. WOOLF & SONS.
Bankers.—National Bank of Australasia (Western Branch), Melbourne.
City Telephone: M 2012. Private Phone: M 3055.
City Address: Box 4003, G.P.O., Spencer St., Melb.

Both are in use, but the majority of Washington growers use the "dead-end." Pipes are not always placed permanently when the outfit is installed. Many growers lay the pipes in a temporary manner for the first season, so that the best faucets for the needs of the orchard may be found. Three methods of laying the pipes are in use:—Underground, on the ground, and overhead. The overhead system is meeting with considerable favor.

Satisfactory in New Zealand.

The Editor, "Fruit World."

Dear Sir,—As a reader of your valued paper, I notice that you have a great number and variety of spray pumps advertised therein, but so far I have not seen any reference to spraying from a stationary plant by means of pipes and hoses. In this district (which, by the way, exported over 600,000 cases of Apples and Pears this season), **the portable spraying outfit is nearly a thing of the past.**

The first stationary plant was put in about four years ago by Mr. Wells, of Tasman. The results obtained were so good that next season saw several more plants installed. Since then, many more have been put in, and this season will see nearly all the growers round here having stationary outfits. The advantages claimed are:—

1. No horses required to pull a pump round.
2. No stoppages, on account of heavy rains making it impossible to haul the pumps.
3. No lost time taking outfit to and from water-holes.
4. By having a tank to hold 400 gallons it is necessary only to attend filling 3 or 4 times daily. There are many other minor advantages.

The money spent on a trolley could be put into a larger pump and higher powered engine—say, a triplex pump, delivering 12 to 14 gallons per minute with power supplied by 5 h.p. engine; this will easily supply pressure for 3 guns.

Some growers use ¾ in. piping only; others prefer ¾ in. for the main, and use ½ in. for the laterals; others again use ¾ in. for the mains, ½ in. half-way along the laterals, finishing off with ⅜ in., to which the taps are affixed. Some use what is known as the "dead-end" system; others have a return pipe to the spray tank; this is necessary when using ¾ in. piping over the whole orchard, otherwise settling takes place, particularly with arsenate of lead, so that trees at some distance from the pump do not get their share of lead, while those near by get too much, and the foliage is damaged by the excess of lead.

Most growers are using the "dead-end" system with splendid results.

For the small grower

who likes to do all the spraying himself it is not necessary to have a large outfit. I know several growers who have been very successful, using a 1½ h.p. engine and single cylinder pump, and doing 10 to 15 acres single-handed. The length of hose used varies from 100 to 120 feet, and the number of trees sprayed at one stand varies from 60 to 100—in other words, a man screws his hose on to any tap he wants spray from, and can spray 60 to 100 trees without shifting to another tap.

We use a very light hose—tested to 600 lbs., and it is very easily pulled about. It takes about 5,000 feet of piping to do 15 acres. Our trees are planted from 130 to 165 per acre. The land is usually a gentle slope to the north, running to fairly steep in some localities. The land is naturally poor, but responds well to fertilisers and lime. It stands dry weather remarkably well, and produces splendid crops of very highly coloured fruit, which commands top prices on the English markets. I trust this letter will be of some interest to your Australian readers, to whom, through you, I send kindly greetings.

Yours faithfully,
(Signed) CHAS. HIGGS.

Mapua, N.Z., 21/6/28.

Does This Interest You!

WELL-KNOWN English firm of Fruit Brokers and Importers require Sound, Reliable and Energetic Representatives, either firms or individuals, to induce Consignments of Apples, Pears, etc., on their behalf, from New South Wales, Victoria, South Australia, and Western Australia.

Terms by Arrangement.

References Required and Exchanged.

Apply in first instance to

S.B. c/o Lockwood Press
1 Mitre Court,
Fleet Street, London, E.C.,
England.

The Sunkist advertisements of the California Fruitgrowers' Exchange have been awarded the prize in a recent public competition for the most effectively advertised food products.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.

Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Davis, J., Western Market.
Dennys, Lascelles Ltd., Temple Court, Melbourne.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
Mills, J. B., & Co., Bank House, Bank Place Melbourne.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
F. B. Bolton.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Piesse & Co., C.

Launceston.

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.

Dennis & Cooper Ltd., Covent Garden.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salters Hall Court, Spitalfields Market, E.1.

Hull.

White & Son Ltd.

Manchester.

The Port of Manchester, rep., W. J. Wade, 8 Bridge Street, Sydney.

GERMANY.

Bremen.

Fruchthandel, Gesellschaft.

Hamburg.

Astheimer, P. H., & Son, Fruchthof.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

AUSTRALASIAN FRUIT IN GREAT BRITAIN.

LONDON.

Ex the "Cathay."

South Australian Apples ex the "Cathay" were landed in good condition, and met with a strong demand. Prices realised were:—Rome Beauties, 10/- to 14/- a case; Yates', 13/- to 14/6; Ribstone, 12/6 to 13/-; Austral Beauties, 12/6 to 13/-; Granny Smiths, 16/6 to 20/-. The Tasmanian Apples in the shipment were of variable quality, and many were bruised, wet, and wasty. Sound Sturmers realised 10/- to 14/- a case, defective 5/- to 8/-; Scarlets, 8/- to 14/6; Cleos., 7/- to 12/6; Crabs, 8/- to 10/-; Democrats, 12/- to 13/-; and Ribstones, 9/6 to 12/-; Romes, 7/3 to 11/-.

* * *

Ex the "Mooltan."

Tasmanian Apples ex the "Mooltan" were mostly in good condition. Sturmer realised 7/6 to 12/6; Democrat, 8/- to 10/-; Scarlet, 7/9 to 13/-; Granny Smith, 12/- to 15/-. South Australian Romes sold at 7/6 to 12/-.

* * *

Manchester.

Ex the "Tasmania."

Apples shipped from New Zealand ex the "Tasmania" realised the following prices by auction at Manchester:—Sturmers, 7/9 to 12/3; Rokewoods, 10/6 to 14/-; Doughertys, 9/6 to 15/-.

* * *

DRIED FRUIT PRICES.

London (23/8/28).

The Chairman of the Commonwealth Dried Fruits Control Board reports having received advice from the London agency of the board to the effect that the sales registered with the agency for the week ended 23rd August amounted to 395 tons, comprising 379 tons of Sultanas, at an average price of £50/11/2 per ton; 10 tons of Currants, at an average price of £57/5/8 per ton, and 6 tons of Lexias at an average price of £42/6/11 per ton. The market is apparently taking greater interest in Sultanas with the commencement of the seasonal demand. The quantity of old season's fruit held in London is approximately 5,750 tons, and it is anticipated that a substantial reduction in this quantity will be made during the next few weeks.

New South Wales.

Sydney (16/8/28).

Mr. F. Chilton, City Fruit Markets, reports, under date 16/8/28, as follows:—

Heavy supplies of citrus fruits and Tasmanian Apples still continue to come forward. The demand generally is dull, except for best quality. Queensland Fruits.—Bananas, 12/- to 22/- per case; Papaws, 10/- to 18/-; Pines, smoothleaf, 11/- to 14/-; Tomatoes. 5/- to 10/- per half-case; Custard Apples, 3/- to 7/-. New South Wales Fruits.—Bananas, 12/- to 22/- per case; Lemons, 4/- to 7/- per bus. case; Navels, 6/- to 9/-; Mandarins, 3/- to 8/-; Oranges, 3/- to 6/-; Sevilles, 3/- to 4/-; Grapefruit, 5/- to 10/-; Apples, Granny Smith, 5/- to 12/-; Passions, 8/- to 20/- per half-case. Victorian Fruits.—Pears, Jos. 8/- to 11/- per bus. case, P.T. 8/- to 12/-, W.C. 6/- to 10/-; Apples, Jonathan, 6/- to 8/-. Tasmanian Fruits.—Pears, W.C. 3/- to 5/- per half-case, W.N. 3/- to 5/-; Apples, Jonathan 5/- to 9/- per bus. case, F.C. 3/- to 6/-, N.Y.P. 4/- to 7/-, S.P.M. 4/- to 9/-, C.P.M. 4/- to 9/-, Dem. 6/- to 9/-.

Victoria.

Melbourne (28/8/28).

The following are the prices ruling at the Western Market. Some special lines brought higher prices, but considerable quantities were sold at lower prices owing to inferior quality, bad packing and grading:—Apples, dessert, 4/- to 6/- per case; cooking, 3/- to 5/-. Lemons, Victorian, 6/- to 8/-. Mandarins, 4/- to 9/-. Victorian common Oranges, 6/- to 9/-, special higher; New South Wales do., 5/- to 7/-; navel Oranges, Murray districts, Victoria, good counts, 11/- to 13/-; large size, 7/- to 10/-; Murray district, South Australia, good counts, 13/- to 17/-; large size, 10/- to 12/-; others, 8/- to 10/-, and 6/- to 7/-. Pineapples, 12/- to 14/- per double case. Green Bananas, special, 17/- to 19/-; choice, 12/- to 16/-, and standard, from 8/- to 10/- per double case.

* * *

Melbourne (24/8/28).

V.C.C.A. reports as follows for the citrus market for the past week:—

Heavy arrivals of Oranges, many of poor keeping quality, had a depressing effect on the market during the week, and it was difficult to maintain

previous prices. Wasty lines of Navels sold at a few shillings a case. Good average standard quality Navels from Victoria and border realised the following rates:—60's, 6/- to 7/-; 75's, 7/- to 8/-; 84's, 8/- to 9/-; 96's, 9/- to 10/-; 112's, 10/- to 11/-; 126's, up 12/- to 13/-. Large sweet Mandarins, 6/- to 7/-; small, 4/- to 5/-. Commons, 6/- to 8/-. Lemons, 6/- to 8/-.

* * *

Western Australia.

Perth (20/8/28).

The Producers' Markets Ltd. report under date 20/8/28:—Throughout the market for to-day's auction, supplies were light, with the demand equal to supplies. In the fruit market, Yates were very firm, with other varieties at previous market rates. Prices realised were:—

Apples.—Yates, prime 16/6 to 22/9, others from 14/-; Granny Smiths, prime 16/- to 18/-, others from 12/-; Pioneer, prime 14/- to 16/9; Rokewood, prime to 14/-; Dunns, prime 12/- to 15/-; Cleos., prime to 15/-; Sturmer, prime to 12/9; Navels, 10/6 to 15/- bushel case, prime 8/- to 12/6, special to 15/6 for ¾ bushel; Oranges, best to 11/-; Lemons, best to 9/6; Mandarins, 8/- to 14/-; Tomatoes, Geraldton, 23/6.

* * *

Queensland.

Brisbane (22/8/28).

There was a fairly good demand for the moderate supplies of fruit, which came to hand at the markets yesterday, and there was no appreciable alteration in values. Strawberries eased a trifle, the best bringing little more than 11/- a dozen boxes. Small Mandarins again moved very slowly, though the demand for the large fruit was good.

Local Fruit.—Lemons, 2/- to 3/- a half-bushel case; Limes, 1/6 to 3/-; Oranges, 3/- to 6/- a bushel case, small 2/- (unsaleable); navels, 5/- to 7/-, large to 9/-; Mandarins, Glens 7/- to 12/-, Feutrals 4/- to 6/-, Emperors 6/- to 13/-, Scarlets 5/- to 12/-, Excelsiors 6/- to 9/-; Papaws, ripe 4/- to 6/-, green 1/- to 2/6 (very slow); Pineapples, rough 5/- to 6/- a case, smooth 4/- to 7/-; Passion-fruit, 5/- to 11/- a half-bushel case; Gooseberries, 9d. to 10d. a quarter; Strawberries, 5/- to 11/-, special higher, a dozen boxes; Loquats, 3/6 to 5/- a quarter-case; Custard Apples, 2/6 to 3/- a quarter-case. Apples, Tasmanian Jons., 9/- to 10/- a bushel case, N.Y. 7/- to 10/-, A.R.O. 7/- to 8/6, H.O.O.V. 6/- to 8/-, Corf 8/- to 10/-, Dem. 10/- to 11/-, S.P. 6/- to 7/-, F.C. green 8/- to 9/-, coloured 4/- to 6/-; Victorian Jons. 9/- to 10/-, faulty 4/- to 6/-, Doh. 7/- to 9/-, R.B. 7/- to 8/-, S. 7/- to 8/6, M. Fav. 7/- to 8/-, Y.A.P. 9/- to 12/-; New South Wales, G.S. 9/- to 10/-; Pears, Victorian Jos. 14/- to 16/-, W.N. 12/- to 14/-, V.N. 9/- to 11/-, K. 8/- to 10/-, P.T. 13/- to 14/-, inferior 5/- to 7/-; Murrumbidgee area navel Oranges, 9/- to 10/-; South Australian Lemons, 14/- to 15/-.

* * *

South Australia.

Adelaide (25/8/28).

Apples, eating 6/- to 7/- per case; cooking 4/- to 5/-; Bananas, Queensland 25/- to 26/-; Citrons, 6/- per cwt.; Lemons, 6/-; Melons, pie 4/- per cwt.; nuts, Almonds, 12/- per dozen lb.; Brazilnuts, 12/-; Cocoanuts, 3/6 to 4/- per dozen; Walnuts, 12/- per dozen lb.; Barcelona, 14/-; Oranges, common 7/- per case, blood 8/-, Mandarin 10/-, navel 13/- to 14/-, poorman 6/-; Passion-fruit, 50/-; Pears, eating 6/-, cooking 5/-; Pineapples, 14/- to 15/-.

* * *

NEW ZEALAND.

Dunedin (10/8/28).

Reilly's Central Produce Mart report under date 10/8/28 prices ruling as follows:—

Citrus Fruits.—Prices are firmer for all lines of Australian citrus fruits. Supplies of Mandarins and Oranges are wanted. Lemons, N.S.W. 22/-, Adelaide 24/-; Mandarins, N.S.W., Adelaides, 18/-, 21/-; Navels, N.S.W. 18/-, Adelaide, wasty 18/-, 20/-; common Oranges, 17/-, 18/-; Poorman's, 14/-; smooth-skinned Sevilles, 15/-; Queensland Pines, 24/-.

London's Marketing Facilities.

Developments at Spitalfields Cost £2,000,000.

Of Value to Australian and New Zealand Growers.

THE extension of the marketing facilities at Spitalfields, London, is of very great interest to Australian fruit producers.

The existing market, which is conveniently situated, has an area of about 2¾ acres, far too small for the immense daily turnover, and the addition of another 2¾ acres of covered accommodation is now completed.

The Corporation of London raised a loan of £2,000,000, for the purchase of the adjoining property, the rehousing of the large population displaced, and the general development of the area as a modern market.

The completion of this important scheme thus trebles the market floor space, as the whole of the extension area has been dug out to make a basement with the market above supported on solid concrete pillars, and the various floors will be connected by electric lifts. Thus, while 98,000 ft. super is added to the ground area of the market, there is another 101,000 ft. super provided in the basement for storage purposes, while in addition there will be 34 warehouses on three sides of the extension, giving a frontage to the market of about 920 ft. The whole market will be surrounded with wide streets to facilitate the transport of the produce into and away from the stands.

This is the result of the City Corporation's policy to render the market as accessible and convenient as possible, **with the idea that reduction in handling costs must in the end mean a reduction in the ultimate cost to the consumer.**

Spitalfields Market has the advantage that it is the only market, so far as the Superintendent, Major F. H. Millman, recalls, which has a series of internal roads. This enables produce to be brought right up to the stands and to be unloaded in a far shorter space of time than in other markets, where it has to be manhandled from the roadway outside. Railway vans can clear their produce direct, and the grower can by road transport send his fruit up to the stand straight from the farm, while the buyer can secure delivery again with only the one market handling. All the internal roads in the extension are carried through in unbroken lines.

Before the completion of the market, every available stand had been applied for.

Spitalfields is now serving an ever-increasing area of North and East London, and is becoming a source of general supply to many places north of the Thames. It is yearly handling more Bananas, as a result of the Corporation's effort to cater for this trade, by providing storage room for the green fruit to ripen, and when the development is completed a still bigger bid will be made for this important trade which, owing to the proximity of the market to the docks and the increased ease of access, will tend to be attracted still more to Spitalfields.

A commodious sale room is provided to give up-to-date facilities for fruit brokers' auction sales.

Details of the pure fruit drink service rendered by the Victorian Railways Department are given in this issue.

7 to 8 Eggs daily from 10 fowls

Neighbors with 25 to 30 hens only get 8 to 10 Eggs a day

THE difference is due solely to Karswood Poultry Spice. The ten fowls were fed with Karswood; the larger number, 25 to 30, were not. If there are sermons in stones there must surely be a lesson in the experiences referred to above. Here is the short but very convincing testimonial :—

7 to 8 Eggs daily—10 hens

Dear Sirs,

I have for some time used your Karswood Spice, and from ten hens have averaged 7 and 8 eggs daily for the last 6 or 8 weeks, during the same time neighbours with 25 to 30 hens were only getting 8 to 10 eggs a day.

(Signed) EDEN K. GREVILLE.
Wallsend Street, Collie, W.A.

Yet another enthusiastic poultry owner writes to glowingly praise Karswood Poultry Spice (which contains dried and ground insects).

Dear Sir,

Having been a user of your Karswood Spice for the last three years, I cannot speak too highly of its wonderful value to me. I can highly recommend it to all poultry breeders, especially backyard beginners.

(Signed) G. SPERRING.
98 *Macauley Street, Lithgow, N.S.W.*

Make this Test

Go to your local grocer, storekeeper or produce dealer. Get a 1/– packet of Karswood Poultry Spice, and give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results; Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Note the Economy

1/– packet supplies 20 hens for 16 days; 2/– packet supplies 20 hens for 32 days; 13/– (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable at all wholesalers and retailers at the following standard retail prices :—½lb. packet, Price 1/–; 1lb. packet, Price 2/–; 7lb. tin, Price 13/–; 14lb. tin, Price 25/–; 28lb. tin, Price 48/–.

16/FP/28

Poultry Notes.

Care of Brooder Chicks.

STRICT ATTENTION to details is the great determining factor in successful poultry-keeping, and there is no matter of greater importance than avoiding late hatched stock on the plant.

Every effort should be made to get the last of the eggs for the season under incubation as early as possible.

Avoid Extremes of Temperatures.

Brooder chicks must not be subjected to extremes of temperature. Usually, the later in the season the chicks are hatched, the greater is the loss from this cause. It is common for poultry-keepers to work their brooders in exactly the same manner in October and November, as during the early season, when heavy frosts are often experienced. This is a mistake.

During the early season the weather conditions are more uniform, and because of this uniformity the desired degree of temperature and ventilation demanded by the chicks in the brooder can be easily controlled. With the approach of summer, however, extreme variations of climatic conditions are often experienced, and it is these that must be guarded against.

Overheated Chicks.

It frequently happens that a warm night follows a cold one, and that is where the danger lies. This is chiefly because the chicks become overheated at night, and in leaving the brooder next morning, the extreme change of temperature proves too much for them. The result is chill, and its consequent troubles—white diarrhoea, droopy wings, etc.

It will thus be seen that as the season advances, the greater must be the attention given in order that the young birds are provided with a uniform degree of warmth and the fresh air necessary for their welfare.

Drying Down After Incubation.

In the artificial hatching of chicks, it is generally accepted that the young birds should not be moved from the incubator to the brooder for at least twenty-four hours after being hatched. This is because chicks are highly susceptible to chill if they are not thoroughly dried off.

While some poultry-keepers adhere strictly to this rule, they make the mistake of not drawing away the water in the moisture pan which is supplied with most incubators. Very often added moisture, especially in dry weather, is an essential to assist the hatching process, but it is of no use whatever after it has served its purpose.

Assist Drying Down.

As soon as the hatch is cleaned up, all moisture should be withdrawn, as obviously the chicks will not dry down thoroughly if compelled to remain in a humid atmosphere. As a further means of assisting the drying down process, the ventilators should be opened wide. It is also a good plan to open the incubator door slightly for an hour before the chicks are removed to the brooder.

Beekeeping.

Hiving Swarms.

IN most text books on beekeeping this kind of advice is given: "When a swarm settles into a cluster, take a light box and shake the bees into it." Such advice is all right where the bees are accommodating enough to settle into a convenient position for the shaking process to be carried out.

Smoke Them In.

Unfortunately, bees get into positions where it is impossible to dislodge them so easily. Sometimes they settle on a small bush, and much of the cluster will be on the ground. In this case, the best thing to do is to place a box over the cluster, and if the bees do not show any inclination to climb up into it, a little smoke may persuade them to do so.

Awkward Positions.

When they cluster in the centre of a prickly hedge, the box should be placed on one side of the hedge, and smoke puffed from the other side will drive the bees towards the box. In the event of a swarm taking possession of a fencing post, and clustering on it from top to bottom, the smoker must again be used, as well as a brush. Brush the bees from each side in turn into the swarm box.

Attend Swarm at Once.

In every case a swarm should be attended to as soon as it settles. Many people are under the impression that swarms should be left undisturbed until nightfall, but this idea is an erroneous one. They should be placed in the box as soon as possible after the cluster has formed, and placed where they shall be sheltered from the sun.

THE MYSTERY WAS SOLVED.

The minister met Tom, the village ne'er-do-well, and, much to the latter's surprise, shook his hand heartily.

"I am glad you have turned over a new leaf, Thomas," said the good man.

"Me?" returned Tom, dubiously.

"Yes; I was pleased to see you at prayer meeting last night."

"Oh," said Tom, his face lighting, "so that's where I was, eh?"

J. E. HANDBURY & SON PTY. LTD.
33-35 KING STREET, MELBOURNE
This is the firm to send your eggs to if you want Highest Values Returned
— Correspondence Invited —
Sole Agents for —
"Lima" Patent Egg Case
Reduces Loss to a Minimum. Every Poultry Farmer should use them
SIZES, 36 DOZEN AND 18 DOZEN. Also
PATENT HOLD-FAST FILLERS Made to Fit Kerosene Cases.

FRUIT PACKING

THE PACKING OF FRESH FRUIT for transport over long distances from the grower to the consumer, without deterioration, is one deserving of careful thought by those who understand the necessity of obtaining desired results without disproportionately increasing labor and expense.

On previous occasions the "Fruit World" has published summaries from the Commonwealth Patent Records, but it should be understood that the ideas described in these articles are not necessarily now protected.

The record of packing devices for over twenty years shows that **eggs have received more attention than fruit.** One of the earliest propositions, however, was the subdivision of the fruit case by longitudinal and lateral removable partitions having holes punched at the intersections to provide for air circulation. Saw-toothed or serrated cleats may be used to provide shelf adjustment, and the space between the shelves or partitions may be divided into cells by bending flexible pieces of material into desired conformation.

Another method of forming compartments has included a series of spaced battens extending between the top and bottom of a case, with metallic partitions driven into and extending between the corners of the battens. Double walled compartments and layers of punnets separated by sheets with ventilation holes disposed between the punnets and in the sides and ends of the case, have been suggested also. In contradistinction, a fruit case has been lined with strawboard in a manner calculated to render it air-tight to prevent the fruit ripening and perishable candies have been sealed in containers enfolded with heavily waxed paper, adapted to be heated to melt the wax and seal the folds.

Boxes of confectionery are commonly provided with separation sheets. By cutting parallel slots in the sheets and upturning the slotted portions parallel rows may be provided. Packing devices including recesses or pockets for the confections may have printed illustrations and descriptive matter adjoining the packets. In fruit packing separation sheets have been provided with a series of holes for the fruit and suitable packing or filling material has been disposed between the sheets or trays. Holes in devices of this kind may be conveniently used for grading. Another proposition was to make a series of radial incisions forming sectors or tongues instead of holes, the arrangement of the sheets being such that although each piece of fruit is supported by a series of sectoral tongues, it actually rests upon the uncut portions of the sheet beneath it.

Seaweed may be used as a packing material provided it is bleached, washed, and then treated with a solution of mineral acid to decompose the bleaching solution. Fruit or vegetables may also be packed in dried coal-ash, produced by burning brown coal. Miniature wood-wool shavings suitable for packing may be made by cutting veneers from wood blocks in a chaff cutter.

Egg crates generally include devices of wire, by which the eggs are gripped, and a considerable amount of attention has been given to forming rings and twisting wires into spoon-shaped loops and other desired shapes and arranging them in pairs, both vertically and horizontally, so that the egg is resiliently supported. In some instances battens, and in other cases parallel wires, have been used to support the carrying devices and springs may be used to cushion the top and bottom of a crate in relation to the carriers. Tray sections having egg holes in conjunction with wire holders have been proposed also, and provision has been made for turning rows of eggs in the crate. Another egg box has provided horizontal partitions having square holes, through each of which four strips of material have been passed, each set of strips being openable apart or separable to receive an egg.

Another type of egg crate has provided shelves between which carrier sheets have been placed, having suitable egg-receiving depressions of such a depth that they may rest on the shelves, and the latter do not make contact with the eggs. Sheets of this kind may be arranged in pairs, each sheet having expressed coinciding cavities between which extend intercommunicating passage-ways provided with ventilation holes.

Egg fillers are somewhat similar which consist of longitudinal and lateral interslotted strips diagonally collapsible, whilst crates divided into compartments into which are placed egg boxes having fillers, are also well known. A collapsible crate may be made from four upstanding battens with a lip hinged to the top of one of the battens. The sides may be rigidly retained by the hasps hinged to the lid.

Everyone is familiar with the corrugated strawboard containers in which electric light globes are packed. Cylinders of a larger size have been adapted for the transmission of eggs through the post. In one of these a series of longitudinal troughs have been sectorally disposed, each trough being sub-divided by partitions adapted to interlock the troughs. In another instance opposite tongues have been expressed inwardly and downturned diametrically across the cylinder at regular intervals, and discs have been placed upon the tongues. Each egg has thus been provided with its own compartment, and may be candled or light tested through the slots or openings formed by the expression of the tongues. Or slots may be made to receive an upper and a lower horizontal division piece or disc for each egg, the discs having central holes in which the eggs nest.

Hand baskets for perishable goods have received attention. One of the matting type has been provided with interhinged sides and ends openable out flat, whilst another idea has furnished a metal frame or tray divided into a series of compartments for different articles or goods, the frame being placed in a basket or hamper.

Packing fresh fruit presents many problems to the grower, but with thought and analysis these difficulties will be surmounted. Patent protection is a legitimate reward for those who exercise their inventive faculties.

Mr. George A. U'Ren, Patent Attorney, "Henty House," 499-503 Little Collins-street, has very kindly furnished us with the above particulars.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE," 499 LITTLE COLLINS ST. MELBOURNE.

To the Manager,
"The Fruit World,
Box 1944,
Melbourne;
or Box 2147L.L.,
Sydney.

Dear Sir,—

Please enrol me as a subscriber for the "Fruit World." I enclose the sum of 8/6, being the first year's subscription.

Name .....

Address .....

Date.....

CODLIN MOTH

The cost of spraying lies not merely in the spray material used—but also in the time and labour involved.

Therefore, be sure that your time and labour are used to give the trees the *best possible cover.*

This can be done by using Cooper's Arsinette, the most superior and scientific Arsenate of Lead yet invented.

By Appointment

Manufactured by

WILLIAM COOPER AND NEPHEWS [Australia] LTD.

(Proprietors of the World-famous Cooper Sheep Dips).

Agents:

N.S.W.: Buzacott & Co. Ltd., Sydney.

Vic.: Cooper Engineering Co. Ltd., Melbourne.

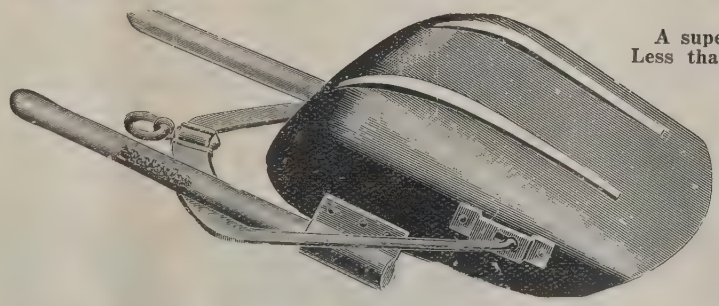
S. Aust.: G. Wood, Son & Co. Ltd., Adelaide.

W. Aust.: The Westralian Farmers Ltd., Perth.

Tasmania: Bender & Co. Pty. Ltd., Launceston; A. G. Webster & Sons Ltd., Hobart.

"Macson" Scoops

A superior Scoop at Less than Usual Prices.



For irrigation work, drains, channels, dams, roads, &c., these Earth Scoops are essential to quick work. The "Macson" Scoop enters ploughed or virgin soil readily, cuts it away quickly and cleanly, and is extremely light on the horse. The body is pressed COLD from a solid plate of hardened steel, thus avoiding the weak corners often found in hot-pressed plates. Fitted with steel runners and detachable handles. Built much stronger than necessary, and will last a lifetime.

PRICES:—3 cub. ft., 57/6; 5 cub. ft., 62/6; 7 cub. ft., 67/6; 10 cub. ft., 110/-.

McPherson's Proprietary Limited

582 COLLINS ST., MELBOURNE;
51-65 BATHURST ST., SYDNEY;
116-130 WEYMOUTH ST., ADELAIDE.

Synthetic Fertilisers.

As a result of the recent heavy crops of fruit, and the unusual autumn rains, there will have been a severe demand upon the plant food content of the soils in Victoria, and yet, one frequently finds growers who, owing to financial pressure consequent upon low prices, are inclined to neglect manuring this year. This is surely a pity, and a great mistake. Almost anyone could get a crop of fruit last season, but it will only be those who manure correctly and liberally this spring who will reap the benefits of the better prices next harvest.

That plant food which will be most deficient this spring will be nitrogen. What residual nitrogen there may have been after last year's heavy demand will have been drained away. Therefore it will be wise to add extra nitrogen this spring both before and after the blossoming.

For application prior to the setting of fruit a considerable amount of attention is being given this spring to the new complete fertiliser, Nitrophoska. This fertiliser is one of a number now being manufactured by the German Synthetic Nitrogen Syndicate, who have embodied in new fertilisers properties which are giving a great impetus to improved production. This particular plant food combination was designed as a basic dressing in all forms of intense culture. It is not held that it is all that is necessary for any particular crop or tree, but it's application ensures that there shall be present, at least the three plant foods in approximately the proportion in which they are removed from the soil by an average annual crop.

It approximates to a balanced ration. In it's manufacture full account has been taken of very recent discoveries. For example, the nitrogen is present both as ammonia and nitrate, it having been quite lately (1926) demonstrated that an admixture of the two well-known forms of nitrogen gives a higher yield than the same quantity applied in the form of either one. Again, it has been demonstrated that complete and intimately mixed fertilisers give higher yields than separate application of the three plant foods.

Where the addition of a purely nitrogenous manure is concerned, as, for example, during the setting of fruit or to supplement the earlier application of a complete fertiliser with a low content of nitrogen, growers now have an additional choice in the form of Urea. The action of Urea and its value as a nitrogeneous fertiliser has been known for centuries, but its presentation in concentrated chemical form is quite recent, and was only made economically possible by the synthetic preparation of ammonia by the Haber process.

Experiments were conducted by a number of growers in Victoria with Urea last year, and most pronounced effects resulted from very small applications. The experiences of Messrs. C. J. Nash (Shepparton) and Anton Lenne (Ardmona), have been published in these columns. A most convenient way of applying this highly concentrated manure is to dissolve it in the irrigation water, 1lb. to a tree in bearing is all that is necessary at any one time, whilst even ½lb. is equivalent to over 1lb. of sulphate of ammonia, and 1½lb. of nitrate of soda.

Urea dissolved in this manner acts very quickly, and produces remarkable growth and deepening of colour. Urea contains nothing that stores up in the soil, as it decomposes entirely to ammonia, water and carbon di-oxide (a gas).

THE "SUNSHINE" ROYAL SHOW EXHIBIT.

Orchardists, vignerons, and small farmers will find much to interest them on the stand of H. V. McKay Pty. Ltd., for here is a comprehensive range of agricultural implements that meets every need of the man on the land.

Worthy of note is the "Sunspray" power spraying plant. This plant consists of the well-known "Sundex" farm engine direct geared to the Sunshine power pump, and mounted on a sturdy transport, carrying a vat of 100 gallons' capacity. The plant is exceptionally light on fuel, and yet powerful enough to operate two lengths of hose at high pressure.

The "Sunbird" mouldboard ploughs, 1, 2, and 3 furrows, are especially designed for orchard use, and orchardists will commend the design of plough and board. They are exceptionally high in clearance, and are unexcelled for burying green manurial crops or heavy weed growth.

Another implement that will interest the small farmer or orchardist is the "Sunglow" low wheel spring tyne cultivator, with forecarriage. The forecarriage is easy on the horses, and ensures a steady, straight drive. A strong yet light two-horse cultivator, the spring tynes, which are spaced six inches apart on the standard machine, thoroughly cultivate and break down the soil. Points can be supplied from 1¼ inches to 5 inches wide. The implement is manufactured in sizes—7 tynes cutting 3ft.; 9 tynes cutting 4ft. 4in.; 11 tynes cutting 5ft. 4in.; and 13 tynes cutting 6ft. 4in. A similar implement with rigid tynes is also on show.

The exhibit of H. V. McKay Pty. Ltd. is immediately opposite the railway entrance to the grounds.

LIME FOR THE LAND

Burnt Agricultural Lime (Calcium Hydrate), 20 bags to the ton, assay nearly 80 per cent. CA (HO), per ton on trucks Curdie, including bags, but less 10/- per ton for 11 or 16-ton truck loads.
Unburnt Agricultural Lime (Calcium Carbonate), 12 bags to the ton, assay 92 per cent. (CaCO3), per ton on trucks Curdie, including bags.
All our Limes are well screened, fit for the drill, and suitable for agriculture or top-dressing. Brings up the clover and strengthens the stock.
It is false economy buying a low grade Lime at under 40 per cent. of Lime, because you require twice as much to get the same results as with the above Lime. It means twice the bags, railage, cartage and labor. Therefore, buy the concentrated, and get the results you are after.
Write for Prices, Mention this Paper.
FARMERS AND FRUITGROWERS ARE INVITED TO APPLY FOR COMPLIMENTARY COPY OF "THE FLOCK-OWNERS' FRIEND."
RUDDS' SPECIALTY, "WHITE SWAN" Spraying Lime, in 40 lb. Lever-top Tins. Highest grade, specially selected for Vines and Fruit Trees.
J. H. RUDD & CO. PTY. LTD., 115 William Street, Melbourne

Do You Read the

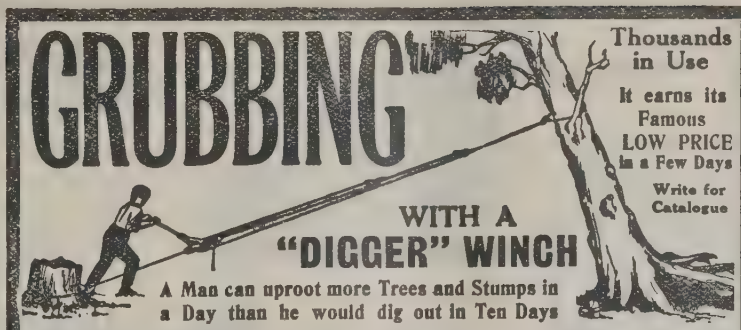
"Garden Lover?"

Write for Sample Copy

to

Garden Lover
Box 1944 G.P.O.
Melbourne

GRUBBING WITH A "DIGGER" WINCH



Thousands in Use

It earns its Famous LOW PRICE in a Few Days

Write for Catalogue

A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days

QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

SUPPORT CO-OPERATION

By Consigning your FRUIT to the

Producers' Distributing Society Ltd.

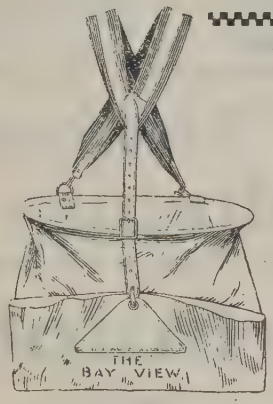
(Late Coastal Farmers' Co-operative Society Ltd.)

Agents for

"BLACK LEAF 40"

and all Orchard Requirements

Melbourne Sydney
Newcastle Hobart
Launceston Devonport



"BayView" Fruit Picking Bag

CAN BE USED FOR ANY CLASS OF FRUIT

Allows use of Both Hands in Picking

No Bruising of Fruit

Weight Carried on Shoulders instead of Back of Neck

Mr. J. LANG, President of the Australian Conference of Fruitgrowers, writes:—"After two seasons' use I am well pleased with the Bags: fruit receives minimum of handling, and is less liable to damage. They are also a great time saver."

PRICE, 12/6 EACH

Postage in Victoria, One bag, 1/3, Two bags, 2/-
Postage, Interstate, One bag, 2/2. Two bags, 3/8

F. R. MELLOR, 440 Elizabeth St., MELB.

Please mention "The Fruit World" when writing to advertisers.

Fruchthof-Bremen

Fruchthandel Gesellschaft

Scipio & Fischer

Fruchthof BREMEN Germany

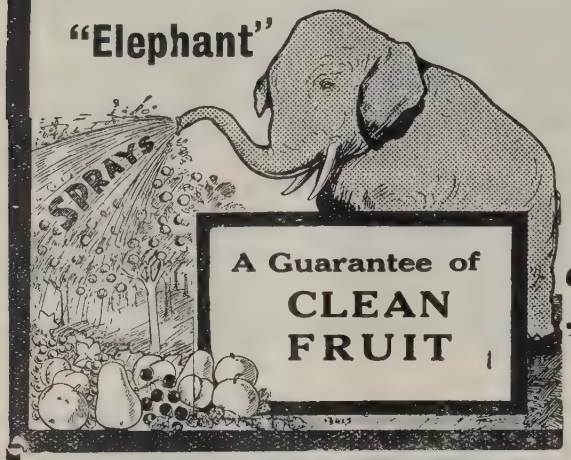
Cable Address: "Orange" Bremen Established 1902

AUSTRALIAN REPRESENTATIVES:

Victoria: The International Fruit & Mercantile Co., 410-416 Flinders Lane, Melbourne.

West Aust.: Messrs. Paterson & Co., Ltd., Perth.

Tasmania: Messrs. E. R. Cottier & Co., Hobart.



ORCHARDISTS

Spraying is essential, and your best Insurance. Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand

Sprays Only

NOW IS THE TIME TO ORDER YOUR SPRAYS.

Always Use "Elephant" Brand Bordeaux Mixture Powder

Equal in quality and Price to the best Imported

Lime Sulphur

ALSO ORDER NOW!

"Elephant" Brand

Arsenate of Lead

Paste or Powder

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of "Elephant" Brand Sprays

Manufacturing Chemists, MADDEN GROVE, BURNLEY, E.1., MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for October, 1928.

Illustrations.

Citrus Packing House in California 387
New Zealand Institute of Horticulture Conference 397
The late Mr. John Brunning .. .. xvi.

Subjec's.

Answers to Correspondents 396-400
Apple Varieties Raised in Tasmania 392–3
Beekeeping Notes 419
Bordeaux and Lime Sulphur Sprays 385–6
Brown Rot in Quinces 386
Brunning: The late Mr. John .. .. xvi.
Californian Fruit Crops .. 406
California: Dried Fruit Situation 414
Canned Fruits 406–7
Charge of the Apple Brigade 394
Citrus Growers at Murrabit, Victoria 389–91
Citrus News and Notes .. 387–90
Citrus Bud Selection 391
Cracking of Dunn's & Cox's Oranges and Apples 391
"Dieback" of Citrus 388
Dried Fruits Industry 410–414
Editorial Chats 394–5
English Fruit Crops 383
Fruit Trade with China .. 386
Insect Pests in the Orchard 369
Letters to the Editor 395–6
London Marketing Facilities 396
Markets—British and Australasian .. .. 420–xv.
News and Notes 383–4–386
New South Wales—News and Notes 401–3
New Zealand Notes 385–6, 391, 397–400
Oranges: Preventing Decay in 387
Overseas Crop Reports .. 386
Poultry Notes 419
Royal Show: Competitions at the 384
South Australian Report .. 396
Spray Residue Removal .. 416
Strawberry Culture 397–400
Strawberry, The Ettersburg .. .. 396 & 400
Sulphuring Fruit: New Method 412–14
Tasmania—News and Notes .. 408–9
Thrip Scourge 415–6
Tree Recording Charts 403
Victoria 404–5
Victorian Fruit Marketing Association 393
Western Australia 390

INDEX TO ADVERTISERS.

Books, Publications—

"Garden Lover," Bank House, Bank Place, Melbourne, p. xxv., xiii.

"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii., xxv.

Canning Machines—

Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. xii.

Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—

Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—

"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. 412.

Fruit Buyers—

Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. xx.

Fruit Tree Suppliers—

Brunning, John, and Sons, Somerville, p. 382.

Ferguson, F., & Son, Hurstville, N.S.W., p. xix.

Lawrey, J. W., Yarra Glen, Vic., p. xiii.

C. A. Nobelius & Sons, Emerald, Vic., p. 410.

Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 408.

Two Bays Nurseries, Moorooduc, Vic., p. xxi.

Fruit Graders—

"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood Vic., cover i.

"Harvey-Delany," D. Harvey, Whitehorse Road, Box Hill, p. 413.

Fruit Picking Bag—

The "Bay View," F. R. Mellor, 440 Elizabeth St., Melbourne, p. xiii.

Manures, Fertilisers, &c.—

Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. 411.

Bone Dust, P. Fitzgerald & Sons, Warragul Rd., Oakleigh, Vic., p. xxii.

Orchard Ploughs, Cultivators, &c.—

D. Harvey, Box Hill, Melbourne, p. 413.

Buckeye Harvester Co., Whiteman St., Sth. Melbourne, p. 416.

Orchard Requisites—

McPherson's Pty. Ltd., 532 Collins St., Melbourne, Vic., p. xi.

Patent Attorney.—

Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. xvi.

Poultry—

Karswood Poultry Spice, Agents all States, p. 418.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—

Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xxi.

Spray and Dusting Material—

"Aero" Brand Arsenate of Lead, A. M. Bickford & Sons Ltd., 42-44-46 Currie St., Adelaide, p. xvii.

Arsenate of Lead, William Cooper & Nephews (Aust.) Ltd., Sydney; agents all States, p. xxii.

"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. iv.

"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.

"Elephant" Brand, Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. xiv.

"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.

"Clensel," Clensel Pty. Ltd., 184 Queen St., Melbourne, p. 408.

"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. xiii.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Sydney, p. 407.

Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. ix.

"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 416.

"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 402.

Neptune Oil Co., 365 Kent St., Sydney, and all States, p. xviii.

Spray Pumps and Guns—

"Save-It" Power Sprayer, Russell & Co., Box Hill, cover ii.

604 Motor Sprayer, A. H. McDonald & Co. Pty. Ltd., 570-4 Bridge Rd., Richmond, p. xi.

"Nufrend," Metters Ltd., 98 North Terrace, Adelaide, S.A., p. xviii.

Ronaldson Bros. & Tippett Pty. Ltd., Creswick St., Ballarat, p. xii.

"Sunshine Sprayer," H. V. McKay Pty. Ltd., Sunshine, Vic., p. xix.

Strapping Fruit Cases—

Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.

"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. xx.

Tractors—

"Smithco" Friction Lift Co., 110 Sturt St., Sth. Melbourne, p. v.

Transport—

London and N. E. Railway, Burns, Philp & Co., agents, p. v.

Tree and Stump Fullers—

Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix., 356.

"Digger," Quick Manufacturing Co., 75 Pender St., Thornbury, p. xiii.

Wire—

Commonwealth Barbed Wire & Nail Works Pty. Ltd., 94 Sturt St., Sth. Melbourne, p. xxii.

Fruit Trees

for 1928 Planting

APPLES	QUINCES	CHESTNUTS	OLIVES
PEARS	FIGS	GOOSEBERRIES	GUAVAS
PLUMS	CHERRIES	CURRANTS	BRAMBLES
PRUNES	WALNUTS	RASPBERRIES	LOQUATS
ALMONDS	ORANGES	NUTS	PERSIMMONS
APRICOTS	LEMONS	MEDLARS	VINES
PEACHES	MANDARINS	POMEGRANATES	STRAWBERRIES
NECTARINES	MULBERRIES	PASSIONS	RHUBARB
			LOGANBERRIES

All Leading Varieties from—

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 1866

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is **8/6.** All other places, **10/6,** post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

HEAD OFFICE:

78a VICTORIA STREET, Melbourne, Victoria.

Address all correspondence to

Box 1944 G.P.O. Melbourne

Sydney Office: Post Office Chambers, 335 George Street, Box 2147.L.L., G.P.O. FRANK CLARKE, Representative.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

BIG GOVERNMENT GRANTS FOR HORTICULTURAL RESEARCH.

In an appendix to the second annual report of the Empire Marketing Board, recently published, it is stated that grants for research and other schemes, approved by the Secretary of State, have been made to the following horticultural institutions:—

East Malling Horticultural Research Station, £9,050 capital and a maintenance grant for five years of £5,068, rising to £5,535 in the fifth year, for extension of the work of the station.

Long Ashton Research Station, Bristol, £7,025 capital, and a maintenance grant for five years of £2,425, rising to £2,750 in the fifth year for investigations into the keeping quality of fruit and its relation to the nutrition of the tree and soil conditions.

Cheshunt Experimental and Research Station, £1,600 capital and £1,660 per annum for five years, for investigations into the control of certain pests and diseases.

Royal Botanic Gardens, Kew, £4,000 per annum for five years to defray the cost of visits of economic botanists to Dominions and colonies and employment of botanical collectors for work overseas.

Also £2,000 per annum for two years, and £819 per annum for three years for the classification of herbarium specimens.

News and Notes.

The importance of the fruit industry to Tasmania may be gauged by the fact that three members of Parliament are on the Executive Committee of the State Fruit Advisory Board.

The operations of the New Zealand Fruit Export Control Board are viewed with interest in Tasmania, and the Advisory Board has requested the N.Z. Fruitgrowers' Federation to permit a visit by their London representative, Mr. Stephens.

Tasmania is moving with regard to securing a reduction of the consolidated charges on fruit consignments in England.

Indications point to only a medium blossoming of Tasmanian Apple trees. Varieties which bore heavily last season are showing less than normal bud development.

Tasmanian Apples, in reopening the South American market, reached 21/- per case for Delicious, 17/6 for Democrat (Tasma); others, 12/- to 14/-. Large colored dessert Apples appear to be what this market needs.

Western Australia expects an excellent Apple crop after the failure of the crop, through thrips, last season.

Put a few Raisins in the children's breakfast food. They will like it better and get added nutrition.

Let the children have a few Raisins to eat in place of lollies. They supply the necessary food value and sugar.

Frost Damages Vineyards.

That sixty fruitgrowers had been crippled financially through the ravages of frost this year, was the statement made by a deputation of dried-fruit men from Nyah and Mildura, to the Victorian Assistant Minister for Agriculture (Mr. Cain) last week. Some settlers were stated to be without food in their homes, as a result of financial stress, and they asked the Government to make £6,000 available to those in distress.

The Minister told the deputation that Cabinet would immediately discuss the matter of relieving those in financial straits.

EAT MORE FRUIT CAMPAIGN.

Success of Victorian Scheme.

Apples Selling Well.

The advertising campaign organised for the disposal of surplus Apples, has proved successful, for sales have increased enormously. The demand for good quality Apples is getting brisker each week, and it is confidently expected that the bulk of the Apples in cold storage will be disposed of before Christmas.

Market in Sweden.

The success of the "eat more fruit" campaign in England has found an echo in Sweden, and inquiries for fruit in that country is persistent.

An organisation has been formed to promote the sale of Apples throughout Sweden, and an advertising campaign will be started in advance of the next Apple season.

Swedish fruit exporters have already taken up United States' connections, the securing of voluntary contributions for the campaign.

Last year, America shipped 209,000 boxes and 94,000 barrels of Apples to Sweden, so it is evident that a fair market for fruit is there already.

Australia should share in this market next season.

JOURNAL OF THE SOUTH-EASTERN AGRICULTURAL COLLEGE, WYE, KENT.

This production, a copy of which has just reached us, gives detailed reports of the work of the College during 1926-27, and contains many interesting papers on original investigations carried out on the college farms during the year under review. A mass of useful information is contained and imparted by this journal, which takes 250 pages of reading matter, and is compiled in a manner that reflects credit on the editor—Mr. S. Graham Brade-Birks, M.Sc., D.Sc., F.Z.S., and the various contributors.

WORLD PRODUCTION OF OLIVE OIL.

The world production of olive oil in 1927 of over 2,000 million pounds was a record by a considerable margin. It was about 60 per cent. above the 1926 production, and exceeded the large yield of 1924 by more than 20 per cent.

Practically the entire production of olive oil comes from the countries bordering and adjacent to the Mediterranean Sea. Spain, Italy, Greece, Tunis, Portugal, and Algeria produce well over 90 per cent. of the world's total. French Morocco, Syria, France, Palestine and Tripoli contribute very nearly all of the remainder.

Production for 1927 (in millions of pounds):—Spain, 1,205; Italy, 298; Greece, 150; Portugal, 298; Tunis, 35; Algeria, 43; other countries (excluding Australia), 80.

ENGLISH FRUIT CROPS.

Apple Crop Now Much Reduced.

Following the report of the English fruit crops in the last issue of the "Fruit World," later information is to hand, dated August 2, from the Ministry of Agriculture. The report is as follows:—

Fruit.

Apples.—An abnormal amount of dropping has occurred, and crops are now very patchy. Development has been slow, and the fruit is small.

Apples (culinary). — Bramley's Seedling, Lord Derby, and Newton Wonder only light in most places; Early Victoria, Grenadier and Lane's Prince Albert fair.

Apples (dessert).—James Grieve, Worcester Pearmain, Cox's Orange Pippin and Blenheim Orange fair generally, and fair to good in places; Allington Pippin and Beauty of Bath fair.

Apples (cider).—Fruit small and crop generally light, though later varieties show better promise in parts.

Pears.—Crops very patchy owing to continued dropping. Catillac fair in places; Fertility fair to good; Conference, Doyenne du Comice, Williams, Jules Guyot and Hessle light crops, possibly not quite fair.

Plums (ordinary).—Crops affected by drought, and are very variable. Czar and Prolific fair; Pershore Egg, Victoria, Belle de Louvain and Monarch mostly light, though fair in some parts.

Plums (Gages).—A poor crop.

Plums (Damsons).—Fair in some districts, but crop is light generally.

COMPETITIONS AT THE ROYAL SHOW.

Melbourne, 29/9/28.

The Apple exhibits at the Royal Show this year surpassed previous years both in quality and numbers. The whole of the large Agricultural Hall was filled with fruit. In the cool stores competition, Blackburn Cool Stores Pty. Ltd., last year's winners, were again successful with 85 points out of a possible 100. Harcourt Cool Stores was second, with 78 points, and Diamond Creek third.

Two hundred and thirty-two cases of Apples was sent in for competition by the 14 district schools competing for the shield presented by the Fruit Exporters' Handling Committee. The Ringwood school won the shield, and the three best exhibits were packed by Miss Eileen Dennett, 98 points; Manson McAlpin, 96 points; and Miss R. Warren, 95 points. The display was a fine one, and the institution of packing classes has proved valuable in raising the standard of packing and grading, judging by the standard reached in this competition.

Several new names were noticed among the exhibitors in the dish and tray exhibits, and several awards were secured by them. Messrs. Pryce, May, of Diamond Creek, were successful with three varieties of dessert Apples; W. G. Whicker second, and J. Tainton third.

Export Apples.

Considerable interest was aroused in the competition for the Orient line jubilee export Apple prizes. In this it was essential for the exhibitor to stage two cases of Apples of different varieties, and to send two cases to London to be judged there. The points for both judgings in Melbourne and London were then added, and the prizes awarded to the exhibitors obtaining the highest aggregate points. The winner was Mr. R. E. Fowler, of Pomonal, Victoria, who gained an aggregate of 193 points. Mr. J. D. Grant, of Somerville, who sent in two entries, was second, and also third, with 191½ and 189½ points respectively. The winner showed Dunn's Favorite and Stone Pippin, while Mr. Grant showed Democrat and Dunn's and Sturmer and Rome Beauty. Judged at the show, however, the best exhibit was that of Mr. W. H. Calvert, of Tasmania, who was awarded 98 points out of a total of 100 for his two cases of Croftons and Democrat. The judge, Mr. J. M. Ward, stating that, as far as the quality of the fruit or the packing and grading was concerned, these could not be faulted, but the exhibitor lost two points for faulty get-up in the case.

The prizes for the best collection of Apples and Pears, open to Associations or individual growers, were secured by East Burwood Co-op. Cool Stores Society Ltd., 1; Blackburn Cool Stores Pty. Ltd., 2; Croydon Cool Stores Trust, 3.

Citrus.

The entries in this section were a disappointing feature. In the export packing competition, for two export cases, only two entries were staged. The Renmark Fruit Growers' Co-operated Ltd. being placed first with 93½ points, and Irymple Packing Pty. Ltd. second with 92½ points.

In all the other classes entries were limited to either two, or at most three, only two classes exceeding this. The Washington Navel shown by Renmark fruitgrowers gained 93½ points, and the Late Valencia staged by the Irymple Packing Pty. Ltd were awarded 93 points.

PURE FRUIT DRINKS.

Health Minister's Observations.

Taking as a guide the dullness of the citrus market, cordial manufacturers are apparently not purchasing their usual quantities of fruit for summer fruit drinks.

Are synthetic drinks to be the vogue again during the coming warm weather?

The Minister for Health (Mr. W. Beckett, M.L.A.), told a recent deputation that the failure of the health regulations was due to the lack of interest displayed by local government bodies, and the fear of inspectors losing their positions if they were too persistent in carrying out the regulations.

The fruitgrower is amply protected under the present Health Acts (provided they are carried into effect), and the manufacturer who is assisting the industry by making surplus fruits into pure fruit drinks is also protected.

The regulations are now uniform throughout the Commonwealth. They were adopted by an important conference in May, 1927, when the Health Authority of each State was represented. The Government Analyst of each State was also present.

It is prohibited, under the regulations, to use expressions, designs, or devices which indicate or suggest that imitation fruit drinks are the product of any natural fruit juices.

BUTCHER HELPS ORANGE-GROWERS.

A Carlton (Vic.) butcher has adopted a novel plan for increasing his trade. Displayed in the window with a box of the best Oranges is a large sign—"We give an Orange to every one of our customers." Carlton children are keen supporters of the innovation.

A NEW INDUSTRY.

Powdered Fruit Juices.

The Trufood factory, at Glenormiston (Vic.), is turning out powdered fruit juices successfully. Having made a success of Oranges and Lemons, they are now experimenting with Apples and Passion Fruit. Fruitgrowers will wish them every success in the new venture.

SCIENCE AND SENSE.

The wisdom—yea, the necessity—of manuring with intelligence as well as with chemicals, is exemplified in the July issue of the "Journal of Pomology and Horticultural Science." The story is there told of a plantation of fruit trees which, until 1923, had been uniformly manured with nitrogenous manures. Then, as the trees were not growing or cropping well enough, a proportion were selected for treatment with potash manures—2½ cwt. per acre of sulphate of potash—while the others received no potash. Within a year of the first application the trees were all improving, and in most cases the improvement has gone on steadily and rapidly to the present time. The trees have made a greater girth of stem and given more and better fruits.

As it is generally believed that potash induces more colour in fruit, the workers carefully analysed their figures to see what really happened. The results seem to indicate that, whereas the potash has had little if any influence on the colour of the fruit of the untipped trees, it has tended to reduce the colour of those of the tipped trees—probably because the more dense foliage of the treated trees caused more shading of the fruits. The figures obtained in these experiments do not show that there is any direct influence of the potash on fruit colour.

Curious to relate, it was noticed that in certain and rather exceptional cases the potash reduced the cropping temporarily, simply because it gave greater vigour to the trees, which grew bigger at the expense of fruit. Apparently the figures do not suggest that the tree lays down more fruit buds as a result of the manurial treatment, but they do show in certain cases that the buds set a heavier crop of fruit—which is the real material point. At the beginning, too, the fruit matured earlier, but the tendency in this direction was not maintained.—"The Times," London.

Bordeaux and Lime-Sulphur Sprays.

Comparative Tests in New Zealand ∴ Some Interesting Results.

(*L. Paynter, Orchard Instructor, Christchurch*)

THE relative merits of bordeaux and lime-sulphur syrays on different varieties and kinds of orchard trees in different localities is always a subject of interest and careful study among fruitgrowers. With a view to obtaining definite information on the point as regards his own orchard, Mr. F. W. Cone, of Papanui, Christchurch, arranged and carried out during last season a specially designed spraying programme in co-operation with the Horticulture Division, the actual aim being the control of black spot, red mite, etc. The trees given this treatment were Sturmer and Delicious Apples only. The locality generally is rather dry, the average rainfall being under 30 in. per annum.

Particulars of the spraying schedule for the trials are presented in the following table:—

Date.	Stage.	Spraying Materials.	Variety.
26/8/27	Dormant	Red oil 1–10	Delicious.
26/8/27	Dormant	Bordeaux 8–6–40, red oil 1–100	Sturmer.
26/9/27	Between tight and open clusters	Bordeaux 6–5–50, red oil 1–100	Delicious and Sturmer.
10/10/27	Pink	Bordeaux 3–4–50, red oil 1–100	Delicious and Sturmer.
29/10/27	Petal-fall	Bordeaux 1½–3–50, red oil 1–100	Delicious and Six Sturmers.
14/11/27	Fruit-set	Lime-sulphur 1–100	Six Sturmers*
29/11/27	Fruit good size	Arsenate of lead powder 1½ lb. to 100 gal.	Delicious and Sturmer.
19/12/27	..	Bordeaux 1½–3–50, arsenate of lead 1½ lb. to 100 gal., red oil, 1–100	Delicious and Sturmer.
3/1/28	..	Sulpho 8–100, arsenate of lead powder 1½ lb. to 100 gal.	Delicious and Sturmer.
1/2/28	..	Sulpho 8 lb. to 100 gal., arsenate of lead powder 1½ lb. to 100 gal.	Delicious and Sturmer.

The remaining trees in the orchard, including Sturmers and Delicious, were sprayed with lime-sulphur, 1–10, at green-tip, 1–40 between open cluster and pink, 1–120 at petal-fall, 1–200 plus Sulpho and arsenate of lead three weeks later, the spray being thereafter repeated at the usual intervals.

Observations were recorded during the period of the test as follows, and should be read in conjunction with the tabulated spraying programme:—

12/11/27: Foliage superior on all trees sprayed with bordeaux plus 1 per cent. oil, except Six Sturmers marked.* These trees received lime-sulphur at petal-fall, following bordeaux; fully one-third of the foliage had fallen. Red spider much more in evidence on these trees than on remainder of orchard where lime-sulphur was used exclusively.

24/11/27: No spot in evidence on trees under test nor in remainder of orchard.

29/11/27: A few leaves now showing black-spot throughout the whole orchard. Showery morning, fine for spraying in afternoon. A period of showery weather previous to application and also following. Slight scorching of foliage after spray, 29/11/27.

19/12/27: Observations made showed black-spot more or less on trees under test, and also on remainder of orchard. Foliage 30 per cent. better on Delicious under test than in remainder of orchard.

31/12/27: Examined trees all through orchard, and found black-spot about equal irrespective of kind of spray used. Foliage 30 per cent. better on Delicious under test than in rest of orchard.

3/1/28: Weather conditions now set fairly dry.

1/2/28: Examined all trees. Found black-spot more or less in evidence all through the orchard, but infection very slight. Red mite now much more in evidence on these trees than remainder of orchard where lime-sulphur was used all through. Foliage on Delicious now inferior to remainder of orchard.

Comments.

It will be noticed that at the petal-fall stage only half the Sturmers were sprayed with bordeaux, the remaining half receiving lime-sulphur. The result of this proved only what has been so long recognised—namely, that it is dangerous to follow bordeaux at pink with lime-sulphur at petal-fall.

One outstanding feature was the superior character of the foliage on the Delicious on which bordeaux plus oil was being used until the end of December. However, by the end of January the

reverse was the case. Red mite had made such headway that the foliage was fully 30 per cent. worse than on the remainder of the Delicious. At picking-time the results went to show that there was no advantage in bordeaux over lime-sulphur for the control of black-spot during the past season. The season was not such a bad one for black-spot, and therefore possibly results would be different when meeting a bad season.

The difference in the Sturmers sprayed with bordeaux as against lime-sulphur was very marked. The fruit generally was very much more russeted and also smaller in size. With the Delicious there was no difference apparent in the fruit.

The programme as outlined for the remainder of the orchard was practically carried out. Slight scorching took place with lime-sulphur, 1–10, at green tip. A slight alteration in this programme is to be made for the coming season.

—N.Z. Journal of Agriculture.

FRUIT TRADE WITH CHINA.

America Does the Bulk of the Business.

It's a Pity Australia Can't Get a Share of the Trade in the Opposite Season.

America continues to improve her fruit position on the Chinese market, and the following statement, published in "Commerce Reports," from the American Trade Commissioner at Shanghai, should be of interest to Australian fruitgrowers.

Chinese imports of **Apples** are received mostly through the port of Shanghai. Orders for United States Apples are placed from July to February. Chinese Apples are on the Shanghai market in early October; but on account of their poor keeping quality, they are fairly scarce by the middle of December. Apples from Japan reach Shanghai in late September or early October, and usually have disappeared by January. Sales of Korean and Japanese Apples in Shanghai are limited. Canadian Apples are on the Shanghai market at the same time as those from the United States.

The Jonathan and King David are among the first varieties of Apples to reach Shanghai from the United States and are followed by Newtown Pippins from September to November. The import season closes with Winesaps, which carry until new-crop Chinese Apples appear.

Most Chinese fruit dealers prefer Apples counting 175 to 225 to the box.

Opening prices in the autumn of 1927 ran from 11/3 to 12/6 a box, c. i. f. Shanghai; at the existing exchange rate, this represented a price to the consumer of 10d. a pound, local (Shanghai) currency. Opening prices in the autumn of 1927 ran around 15/-, c. i. f. Shanghai; this represented a price to the consumer of 1/- a pound, local currency. As contrasted with United States Apples, Korean and Japanese Apples were 30 per cent. cheaper and Chinese Apples 50 per cent. cheaper.

Over 95 per cent. of the **Lemons** imported into Shanghai are from the United States. Inasmuch as Chinese production of Lemons is of no commercial significance, and the small imports from Italy, though cheap in price, do not meet with favor, it would appear that United States Lemon exporters have the Shanghai field practically to themselves.

Imports of **Grapes** are not shown separately in Chinese import statistics. This business first assumed importance about 1923, when 300 lugs (the lug is equivalent to 22 to 24 pounds, net) were imported; imports rose to 1,000 lugs the next year, 3,000 lugs the following year, and around 5,000 lugs in 1927. Practically all imports of Grapes into Shanghai are from California. Efforts have been made to import Grapes from Australia, as well as Italy and France, without any success, as the attempts have been more or less desultory. Grapes are produced in China but these sell at approximately one-half the price of Californian Grapes.

OVERSEAS FRUIT CROPS.

Apple-growers in U.S.A. are trying to reckon how much the rather liberal crop outlook was changed by the June drop. It looks now like plenty of Apples both East and West, but possibly no more than can be sold well if export trade is active. Europe expects a fairly good crop in most sections, but will need to import more if the price is moderate, as seems probable (states the U.S.A. Department of Agriculture).

English news reports show gains of about 8,000 acres in fruit last year, more than half of the increase being in Kent, Worcester, and Hereford Counties. Additional planting is reported this year in the same districts.

Peaches look like a big crop. Georgia growers are worrying now over the market surplus expected in midsummer when Georgia, North Carolina, and States farther west are shipping together. Their problem is to keep the low-grade fruit out of the market, and to distribute shipments as widely as possible. The best fruit has been bringing fairly high prices in northern cities, but shipments are hardly yet in full swing. The northern Peach crop was reported promising at last accounts.

Grape-growers expect another big crop in California. They are making plans to control shipments, but are likely to send out as many as can be sold without smashing the market. They did a very good job last year in controlling the situation, but the moderate supply of other fruits was in their favour. They are likely to meet a still harder problem this season. The success of the producers in controlling the western situation will have a bearing on the market prospects of the Grape crop of New York, Pennsylvania, and other eastern sections of U.S.A.

BROWN ROT IN QUINCES.

Advice to Victorian Growers.

In many orchards, particularly in metropolitan districts, it is common to find a number of Quince trees on or adjacent to blocks occupied by Peaches. The fungous disease known as brown rot attacks stone fruits, and in some seasons is very destructive. According to the Superintendent of Horticulture (Mr. J. M. Ward), it is not generally known that the rotting of Quinces on the trees is frequently due to the same fungus. Last season the brown rot fungus was unusually bad in Quinces. As a result, "mummy" Quinces can be found on most Quince trees in the metropolitan district. These mummies are a "carry over" for the fungus, and unless gathered and destroyed they will produce in the spring millions of spores to infect the Peach, Cherry, Plum and Apricot crop.

Mr. Ward's advice to growers is that no time should be lost in collecting these mummies, which should be burnt. Affected trees should also be sprayed as soon as possible with lime sulphur one in 35, or with standard Bordeaux mixture. Quinces in the past have received very little attention, but if growers neglect these precautions it will be impossible to control the disease, and save the stone fruit crop should the season be favourable to the development of the fungus.

Preventing Decay in Oranges.

Experiences in California ∴ Brogdex and Carbonate of Soda Washes Compared.

By D. H. Rundle Whittier, Cal., U.S.A.

The conditions surrounding the use of chemical preventives in Citrus packing houses in California, to hold down the decay of Oranges in transit, will be of interest to Australian Citrus growers.

This subject was discussed at the May meeting of Citrus growers in Melbourne, and appears to have been side-tracked, pending further information (June "Fruit World").

Since the processes known as "Brogdex" and "Brogdite," have been developed in U.S.A. by the Brogdex Company, under U.S. Patents, the writer has been in personal contact with officers of the company in Los Angeles, on several occasions.

Within recent months they have won a comprehensive verdict in the U.S. Patent Courts over the American Fruit Growers, whereby the validity of their patents have been completely upheld.

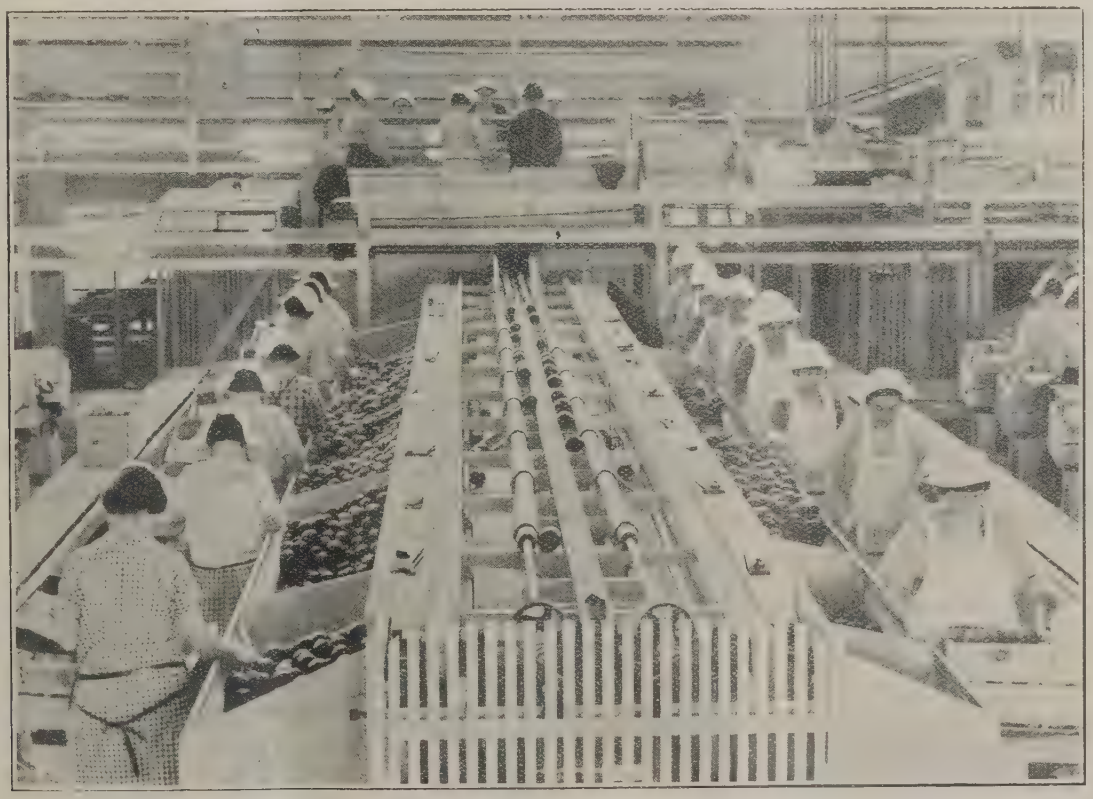
Under the terms of contract issued by the Brogdex Company, the fruit companies using their two systems of borax-boracic acid solution, and paraffin spray, pay to the Brogdex Company a royalty of 6 cents (3d.) per packed box.

It is more on that point than on any criticism of the merits of the system that the fruit companies have broken with the Brogdex Company.

Briefly it can be said that the California Fruit Growers' Exchange (Sunkist) controls 73 per cent. of the Orange tonnage shipped. Mutual Orange Distributors (M.O.D.) about 14 per cent., and American Fruit Growers, 12 per cent. Of these companes, only the M.O.D. is to-day using the Brogdex system, and paying the royalty. Because of the added cost Sunkist has discontinued it in such houses as had installation, and the court decision decided the American Growers similarly.

That condition I think will continue, for the two latter companies have turned to the use of bi-carbonate of soda, and profess at least to be quite satisfied with the change. Packing house managers for all three companies—personal friends of mine—say they are quite satisfied with the method they have, and that makes it unanimous.

From the cost basis, the carb-soda certainly has the victory. In 400 lb. barrels, it costs about 1¼d. a pound. In practice a 3¾ per cent. to 4 per cent. solution is used in water at a temperature of 95 degrees to 100 degrees, this heat also speeding drying operations. The Oranges go into a warm soap water first, through brushes, under a water spray, and into the soda tank. Many houses run a season without bothering to clean the tank. The Brogdex Company have named £150,000 as their value on the



Section of interior view of a Citrus packing house, near Los Angeles, California.

Australian rights for Brogdex-Bragdite. Until export becomes a prime factor, it may be advisable to experiment with the carbonate of soda treatments.

INFERIOR ORANGE TREES.

Methods of Re-working to Better Types.

Two methods of re-working inferior varieties and unsuitable types of Oranges are referred to by the N.S.W. Department of Agriculture. The methods are by budding or grafting. Usually the insertion of buds obtained from selected trees into vigorous young shoots forced out after dehorning, or after a severe cutting back of the main limbs or trunk, is the most satisfactory method, but grafting is also frequently done. Moreover, a combination of the two methods may be employed.

The requirements and conditions necessary for the success of either operation are:—

1. The movement of the sap must be free, which ensures the bark being in good condition for lifting, and assists the graft or bud to form a good union.
2. The weather should be fine; rainy or very windy weather is to be avoided while the work is actually being done.
3. Knives used must be keen.
4. The operation of budding or inserting grafts must be carefully and fairly quickly done.
5. Buds or grafts must be firmly and securely tied to ensure that a good union is effected.

Spring is the best time for the above-mentioned operations.

FLORIDA'S CITRUS CROP.

18,000,000 Boxes.

The official estimate for next season's citrus crop in Florida, U.S.A., is eighteen million boxes.

APPRECIATION.

The Editor, "Fruit World."

Dear Sir,—Please find enclosed postal notes, being remittance for "Fruit World," two years in advance. Thanking you for the wide range of information on the fruit industry contained in the "Fruit World," and wishing you continued success.

(Signed) I.L.S.

Cherry Gardens, S. Aust., August 22nd, 1928.

"DIEBACK" OF CITRUS.

Exanthema is Troublesome.

A Seasonable Reminder to Citrus Growers.

EXANTHEMA, or "die-back" disease, a trouble to which all cultivated varieties of citrus are liable, has been in particular evidence this season. It is one of our most serious diseases, and may cause, according to the severity of its attack, damage ranging from very severe stunting of the trees and entire loss of fruit, to very slight tree injury, together with the marking or dropping of a small percentage of the fruit (states the N.S.W. Department of Agriculture).

This disease occurs in most countries where citrus crops are grown, but the actual cause is still unknown. It is known, however, that soil types and soil conditions play an important part in regulating, even if they are not in some way responsible for, the disease. Trees grown on certain types of sandy soils are invariably attacked, whilst those on loam and good types of sandy loam soils are but very rarely attacked by the disease. What part subsoil types play in governing the incidence of the disease is still unknown, but where drainage is poor, or where a hardpan occurs, the trees are more liable to attack.

Symptoms.

The effects of exanthema are to be seen on the smaller branches, leaves, and fruit. The fruit may be small and hard, and insipid to the taste, with a thick light-coloured skin, and marked with dark-brown gum spots; in bad cases, it splits open. Affected fruit may fall prematurely, either immediately after blooming, or at any stage until half grown. The bark of the mature twig may be split and furrowed, with a reddish exudate of dry gum on the surface. The young succulent shoots may be yellowed and covered with a number of dots of gum, or with a uniform coating of glossy brown gum. Shoots so affected may die back subsequently.

Sometimes a collection of gum will occur on the terminal branches and twigs below the nodes from which the buds emerge, and cause a definite gum pocket, the twig being visibly swollen below the node. If cut across, such a twig will be found to contain liquid gum at the swollen area. As the affected stem grows, the pocket may be buried under new wood. Gum may exude from the pocket.

Near the base of young shoots which die back, the buds frequently attempt to grow and are generally checked early, with the result that a "bunch" of buds or short twigs occurs in the place of a normal twig.

In addition to these more important symptoms, there are a number of other secondary affects, such as the production of abnormally large thick leaves, frenching, or mottle-leaf, dark-green foliage, and S-shaped branches. In severe cases, the development of multiple buds and the shortening of the internodes may give the tree a stunted bunched appearance.

Very rarely are all of these symptoms to be seen on a diseased tree, and in some cases only one or two may be present. The occurrence of either stained terminal branches, bark exudate, or marked fruit is sufficient for diagnosis.

Control.

Improvement of drainage and increase of the amount of organic matter in the soil are both helpful in control. Where drainage is bad it should be remedied by under-draining, or in cases where a hardpan exists, by breaking up the hardpan. Citrus should not be planted on hardpan soils.

On poor sandy soils any method which will increase the amount of organic matter will be beneficial. The use of farmyard manure in sufficient quantities, of a good soil for resoiling, or of abattoir waste, etc., have been successful in controlling the disease wherever they have been tried. Mulching with vegetable mould (old leaves and bush scrapings) has in some cases given good results. Where farmyard manure is unobtainable, the incorporation of green manure crops of a bulky (preferably leguminous) nature is worthy of a trial.

Departmental experiments have been carried out, however, regarding more direct methods of control, and the results to date indicate that spraying of the trees and treatment of the soil are both effective. Affected trees and those which have not responded to the previously mentioned methods of treatment should be sprayed with Bordeaux mixture (6—4—80), adding 1 per cent. (1½ quarts) of emulsified red oil. This spray should be applied to the trees at once. Experiments are being continued by the Biological Branch of the Department as to the value of later applications. Applications of copper sulphate (bluestone) to the soil at the rate of 2 lb. per tree have also given good results. In making such applications, care should be taken that the bluestone is not very lumpy, and that the application is even, or individual root injury may result.

The bluestone should not be applied in the immediate neighbourhood of the trunk of the tree, but in a ring about coincident with the outer roots, as is recommended with manure.

Citrus Growers at Murrabit, (Vic.)

Consider V.C.C.A.'s Claims.

Some Straight Speaking.

The foregoing headlines appear in the "Kerang New Times" of September 11th, 1928, in reporting a meeting of citrus growers in the Murrabit Hall on Friday, September 7. The report continues:—Citrus matters were considered fearlessly. Mr. D. Walters was voted to the chair.

The Chairman read the notice of the meeting, which was for the purpose of—

1. Receiving a report on the activities of the V.C.C.A.
2. To investigate charges of alleged mismanagement to be made against the Association.
3. To discuss the advisability of forming a local Association.
4. To determine the policy of any such Association formed.

Mr. Schwenessen said he was present to answer charges which Mr. Jackson would make. There had been some dissension, and he admitted there were weaknesses. There was an immense volume of fruit coming on the Melbourne market, and it was creditable that it was kept up to price. He could not say what percentage of fruit the V.C.C.A. controlled, as he could not get actual returns of fruit from all Victorian districts or all the bulk returns from S.A. and N.S.W. The Sydney market had been in a state of chaos for three or four years, and with navels selling at 4/- to 8/- a case there, and at 13/- to 14/- in Melbourne, speculators bought fruit in Sydney and were willing to accept 11/- in Melbourne, and so undersold the V.C.C.A. by 2/- a case. Even if the V.C.C.A. only controlled 45 per cent. of the fruit instead of 70 per cent., it would exercise a measure of control. If it had not been in existence for the past two years, navels would only be now worth 6/- or 7/- in Melbourne for good counts. They could understand how hard it was to hold the market when prices differed so that gluts occurred. Leeton and Griffith were mainly responsible for this, and an effort had been made to try and bring them in on the Federal Council. (The speaker then outlined a scheme for stabilising the Sydney market.) The Federal Council should be able to take over Federal affairs and leave the States only their domestic affairs to deal with.

Mr. Jackson said figures quoted by Mr. Cook as to the fruit handled by the V.C.C.A. did not tally with the figures based on the levy basis. The levy for Victoria, on Mr. Cook's figures, should be £3,000 odd, but the actual levy was £1,044.

Mr. Schwenessen said a levy had not been collected in "direct" sales. He was not "married" to any particular scheme. The V.C.C.A. had done so much good that all should be affiliated with it. If changes were needed, they could make them. He believed what must ultimately come was a Commonwealth Association, in which each grower would lose his identity as far as his fruit was concerned.

In further reply to Mr. Jackson, Mr. Schwenessen said directors were elected at the company meetings, and legally could not be elected at conference. The S.A. growers were present at conference, but not at company meetings. Only accredited delegates were allowed to vote.

Mr. Reilly: Were members from all sections of the V.C.C.A. called together to elect the directors this year? —From memory he could not say how many were present at the company meeting, but he thought all districts represented at conference were represented at the company meeting.

Mr. Taylor: Is any paid official of the V.C.C.A. allowed to move a motion?—Mr. Schwenessen: Most decidedly not. At Federal Council meetings Mr. Cook, as a member of the Council, could do so.

Mr. Taylor: I have a report from the "Argus," in which it was reported that after a motion had been cast aside, Mr. Cook said, "I move the following . . . . . "—Mr. Schwenessen: I would like to see that. One can't always believe the papers.

Mr. Reilly, in a speech of some length, said he did not believe that the bulk of the fruit in Victoria went through V.C.C.A. channels. The limitation of agents was the biggest bugbear.

Mr. Schwenessen: I don't say the V.C.C.A. is all that it could be, but that was because growers did not support it. The prosperous conditions in the last eight years were due to the growers organising. The V.C.C.A. was holding the market at 12/- instead of 8/-.

Mr. Egan said if prices got too low growers would stop supplies. The V.C.C.A. could do a lot more. He had once spoken to Mr. Cook about going into N.S.W., and Mr. Cook had said that was impossible. Mr. Cook killed that show from the start.

Mr. Taylor said outside agents got better prices than V.C.C.A. men.

Mr. Schwenessen: Maybe so. Any marketing scheme rested on the support of growers. If an outside agent got 1/- a case more, you say the V.C.C.A. is no good. He said the V.C.C.A. brought about the better conditions.

Mr. N. Cox said he left the V.C.C.A. on account of £ s d., and profited by doing so; but he had no doubt all should be in an organisation. He admitted that all who sold outside the V.C.C.A. benefited by the V.C.C.A.

Charges of Mismanagement.

Mr. Jackson: Mr. Cook made statements which cannot stand up to facts. In relation to Queensland fruit, Mr. Cook said 80 per cent. of this went through the V.C.C.A. The V.C.C.A. had handled 42 to 53 per cent., but the amount dwindled to nothing at the finish. He had the total figures for Queensland fruit and the V.C.C.A. figures, and Mr. Cook was well out of it. When Queensland had consigned up to 52 per cent. to the V.C.C.A. and then dropped out, there must be something wrong. Mr. Cook said outside agents dipped their hands in their pockets, but people said they could not purchase from the V.C.C.A. at V.C.C.A. published prices. The majority of fruit from this district must be of standard quality, yet if an outside agent got 1/- or 2/- more for it, he was accused of dipping into his pocket to get their trade.

Mr. Jackson said he admitted the growers must have an organisation, but the V.C.C.A. was not holding growers.

Mr. J. O'Brien pleaded that the meeting should not lose sight of the objects for which it was called. If a grower had anything definite against the organisation, let them now thresh it out. All favoured an organisation, but only 40 per cent. in this district were in the only organisation there was.

A Specific Charge.

Mr. S. Taylor said he was a member of the V.C.C.A., but "got out" in 1923. He was sending fruit to a V.C.C.A. agent. He sent 54 cases by boat to Swan Hill one Sunday, and 60 cases on the Tuesday—114 in all. When he got his account sales back they showed that of 54 cases, 13 had been rejected, and the note said, "This fruit arrived wasty." Of the 60 cases, 15 had been rejected, the reason being the same. That was 25 per cent. of his fruit rejected. He received a letter from the V.C.C.A. to the effect that the inspector had reported that the fruit was wasty, and he had given instructions for it to be

rejected. On the Wednesday he had been called to Melbourne. He went to the agent on the Thursday morning and said to the salesman, "Have you any Riverside fruit here?" The salesman said they did have a consignment, but it was all gone. His fruit was the only fruit from Riverside that morning. He wrote to an official, referred to the account sales, and asked him to take a declaration from the market representative and from the agent that the fruit was wasty and 28 cases had been rejected. That official "closed up." He took the matter up with the agent, and told him he must have a declaration from the man who took the fruit to the destructor. The agent personally came up to see him, and said there was something wrong. Inside a week he got a letter, stating that the fruit was not wasty, and that there was no loss, and he was paid in full for the 28 cases. He accepted the money, but was sorry he had not taken the matter to the Department of Agriculture. He had appealed to the V.C.C.A., and that body did nothing, and would not help him when he stated a definite case. When he met the market representative later that gentleman said he could not remember anything about it. He therefore "pulled out." Till the V.C.C.A. cleaned up, he would not go into it.

Mr. Reilly said the growers did not choose the accredited agents.

Mr. Clapp said they were appointed by representatives from every district affiliated with the V.C.C.A.

Mr. Reilly: Mr. Cook said that the accredited agents got better prices. Why was not the fruit flowing to them? The agents were re-appointed year after year without reference to growers. It would be better to increase the agents so as to bring in all the good firms on the market.

In reply to further criticism as to the limitation of agents, Mr. Schwenessen pointed out that when the question of including another two agents came up two years ago, Mr. Cook fought for it.

Mr. Jackson said a conference of citrus growers should be called for in Melbourne, and delegates should be elected from each district, irrespective of any organisation.

Mr. Sherlock favoured sending a questionaire to all citrus growers in Victoria.

Mr. G. Morton said that he had been associated with the Citrus Association since its inception, and he thought that one of the fundamental principles was that the minority should accept the rule of the majority. Would all accept a two-thirds majority? He said that an organisation was needed, but reform was necessary. He moved:

"That any motion passed at that meeting by a two-thirds majority be accepted by all."—Seconded by Mr. Webb, and lost.

Mr. Schwenessen said no outside body would bring about an alteration in the V.C.C.A. He moved:

"That a body be formed in this district to be affiliated with the V.C.C.A."

Mr. Reilly said that he supposed because he did not believe in the Mohammedan religion, Mr. Schwenessen thought he should turn Mohammedan to reform it.

Mr. Parkes said he was not satisfied with the V.C.C.A., and if they formed a sub-branch of it how could they get reform?

After further discussion, Mr. Clapp seconded Mr. Schwenessen's motion, which was carried, the voting being 17 for and 13 against.

Office-Bearers.

Office-bearers were appointed as under:—President, Mr. Phillips; Secretary and Treasurer, Mr. N. Murray; Committee, Messrs. Morton, Clapp and Cox. The membership fee was fixed at 5/-.

* * *

Later advices state that the foregoing report leaves matters much as they were. The district is divided. Some favour the V.C.C.A., while the Murrabit Citrus Packing Co. remains outside the V.C.C.A.

West Australia.

Lower Chittering Notes.

By the time these notes appear, navels will be a thing of the past for another season. The crop has, generally speaking, been good, and prices well maintained in the local market.

Those growers who have any quantity of Late Valencias are looking forward to a good demand for that variety, with the consequent good returns.

The main crop of Lemons has been a fair one and the local factory, by paying £11 per ton, has given growers a better return than previous years.

Orange drinks

have also received some attention from the Pure Foods authorities, with the result that Orange drinks must contain at least 50 per cent. of the pure fruit, which is a good move, and should prove of some benefit to both consumer and grower.

A move has been made to resuscitate the local Co-operative Citrus Associations, but results are somewhat indifferent. If I may be allowed to express an opinion, it is that, generally speaking,

growers are doing too well

to feel the need of co-operation, and until the time comes when they have their backs to the wall, fighting for better conditions, then only will the need for co-operation be apparent. Until then, any effort to make the body a live wire will, I am afraid, show little result.

Despite the shortage of young trees, well over 2,000 have been planted this season, and, had trees been obtainable, there is no doubt that the above figures would have been much larger.

Ploughing, manuring and tree-forking are now the order of the day, and growers find this the busiest season of the year. Aphis, so far, has not made an appearance, so perhaps we are to be given a spell from this particular pest, but I hasten to touch wood.

Weather conditions are all that could be desired, which statement deprives me of the "stock" growl of the man on the land.—"Surtic."

CITRUS DEVELOPMENTS IN ARGENTINE.

Heavy Plantings.

There is to be a great development of the citrus industry in the Argentine. Many thousands of trees have been planted, and big areas are being prepared for further planting.

LEMON IMPORTATIONS.

The Victorian Central Citrus Association reports as follows, under date September 21.

Importations of Lemons.—Information has been received that five shipments of citrus fruits, presumably Lemons, have been arranged for from Sicily, to arrive in Australia in the period from October 19 to February 18. District Secretaries and Packing House Managers are requested to immediately inform the manager of the V.C.C.A, 360 Collins-street, Melbourne, what is the estimated summer crop of Lemons in order that we shall be in a position to meet this competition. Some buyers are already inclined to make contracts for the purchase of these Italian Lemons, in the belief that the Australian summer crop will be light, following the heavy winter crop now being marketed.

CITRUS BUD SELECTION.

Census of Victorian Trees.

Improved Types are to be Noted and Inspected.

Orchard Chart Available for Every Citrus Grower.

IN an endeavor to improve the strains of citrus trees, the Horticultural Division of the Victorian Agricultural Department has issued orchard charts to growers, asking that growers will take a census of their groves.

It is asked that every tree be located on the chart, and that only those trees producing fruit of exceptional merit as to shape, rind appearance, and plup quality, also prolific bearing habit, be marked with an "x" on the chart.

In his letter to citrus growers, Mr. J. M. Ward, Horticultural Superintendent, continues:—

"When this chart is completed it is earnestly suggested that you will at once notify your district Association Secretary, or the Citriculturist, that you have made your selection. An officer will then visit your grove, examine the trees and fruit; and if, in his opinion, the type is desirable for purposes of bud selection, a metal tag will be affixed to the trees; for three years these trees will receive special study."

The Department emphasises the fact that the co-operation of growers is urgently desired, and that budwood will not be taken without the grower's consent.

(Interesting Citrus Notes also appear under N.S.W. Notes, on pages 401-2.

"A FARM SMITHY."

Story of H. V. McKay.

An interesting story of the early struggles of the late H. V. McKay, before he reaped the full advantage of his invention—the combined harvester—is set out in booklet form, a copy of which we have just received from the Sunshine Works. McKay made his first machine in 1884, when 19 years of age, and a coloured picture of the little bush smithy at Drummartin, near Bendigo, where he made the machine, is shown in the booklet. The historic little slab building is now re-erected at the Sunshine Works, where it will be preserved as a memento of H. V. McKay's vision and pluck.

A copy of this interesting booklet may be obtained gratis on application to H. V. McKay Pty. Ltd., Sunshine, Vic.

Cracking of Dunn's and Cox's Orange Apples.

Investigation in Nelson District, New Zealand.

(J. A. Campbell, Director, Horticulture Division.)

During the past few years fruitgrowers in different parts of New Zealand have suffered considerable anxiety and loss through the russeting and excessive cracking of certain varieties of Apples, particularly the Dunn's and Cox's Orange varieties. In part of the Nelson district this condition appeared to be going from bad to worse each year. The Department of Agriculture and the Cawthron Institute were, naturally, called upon to institute investigations with a view to determining the cause of the trouble and methods of control. Early in the history of the trouble the Orchard Instructor at Mapua, Mr. B. G. Goodwin, gave growers very sound advice—namely, to thoroughly cultivate and manure their land, and to prune their trees severely with a view to getting rid of all weak and exhausted wood, to promote the formation of new growth, and to generally stimulate a more vigorous growth of the tree. The investigations carried out by the Biological Laboratory of the Department largely confirmed this advice.

Although the russeting and cracking referred to is still in evidence, a very marked improvement was noticeable last season where heavier pruning, etc., had been practised. In consequence of this the following questionnaire was issued in April last to those growers of the Nelson District who were held to be in a position to furnish information:—

(1) Have you experienced the russeting and cracking of Dunn's and Cox's Orange Apples?

(2) Does your experience suggest that it is due to a disease, or that it is physiological trouble arising from causes remediable by means of improved cultural methods?

(3) If the former, on what do you base your opinion?

(4) If the latter, is your opinion the result of actual practice? If so, what cultural methods varying from those practised in your orchard previously have you adopted to overcome this?

The following is a summary of the replies received:—

Twenty-one growers replied as having experienced cracking. Of these, nineteen are of opinion that the trouble is physiological, and two are of opinion that it is due to disease.

Of the nineteen who are of the opinion that the trouble is physiological, fourteen include hard pruning in their system of control. Of these, five mention hard pruning as the only special feature of orchard management necessary; five add good cultivation and manuring; three make the further addition of the use of non-caustic sprays; while the fourteenth relies on hard pruning and the use of non-caustic sprays. Of the remaining five, one bases his success on cultivation and manuring only, another on the same plus the use of non-caustic sprays, while a third reports success through omitting bordeaux in the spring and the use of atomic sulphur plus lime-sulphur in the summer; the remaining two report no success.

Growers Nos. 20 and 21, who blame disease, hold that it can be controlled, one by using Sulpho with lime-sulphur during the summer, and the other by hard pruning, good cultivation, and by adding plenty of plant food to the soil.

Notwithstanding the fact that the majority of the growers communicated with are of opinion that the trouble can be overcome by cultural means, continued close attention will be paid to the matter by the Department until this is definitely confirmed or otherwise. In the meantime the experience of growers, together with details as to experiments undertaken —whether successful or otherwise— if forwarded to the Department from time to time, will be appreciated.—"N.Z. Journal of Agriculture."

DIDN'T KEEP A HORSE.

The blushing bride was doing her first day's shopping. The grocer sold her many samples of his stock, and finally introduced Horse-radish. "How about taking some nice Horse-radish?" asked the grocer.

"Oh, that's no use to us," answered the young thing, with a smile, "we keep a car."

A BIG ORDER.

An old colored man was arrainged before a justice on a charge of assault. During the proceedings the judge asked him if he wanted a lawyer appointed to defend him.

"No, no, judge," he replied, "I don't wan' no lawyer, but I sutinly would like a couple of good witnesses, if you got 'em."—"American Legion Weekly.

Apple Varieties Raised in Tasmania.

(By P. H. Thomas, Tasmanian Government Fruit Expert.)

VERY FEW FRUITGROWERS are aware that Tasmania, besides being the largest Apple-producing State of the Commonwealth, has also contributed some of the most valued varieties which are now in cultivation. Whilst each year there are a number of new Apples evolved either by chance seedlings, intentional hybridisation, or "sports" from other kinds, very few of these either obtain a place in the industry, or are cultivated to any great extent. The reason of this is obvious. To-day there are some hundreds of varieties from which the planter can make a choice, and any new Apple must possess outstanding merits or be an improvement upon the existing kind before it receives consideration from a cultural viewpoint.

The Apple which is sought after both by producers and retailers is the "economic variety." This, if a dessert kind, must possess flavour, colour, and good keeping qualities; the tree must be of vigorous growth, a regular cropper, and not particularly susceptible to fungus or insect pests.

Very few new Apples will possess all these merits, but occasionally one is brought forward that will fulfil most of the requirements, and after the natural prejudices of the trade to a new and unknown variety are overcome, its qualities may be recognised, and the Apple will become a firm favourite upon the markets.

Tasma (Democrat).

Amongst all the Apples which have been raised in Tasmania, Tasma, or Democrat, is the most popular and well known throughout Australia. The variety originated as a chance seedling some 25 or 30 years ago at an orchard belonging to Mr. J. Duffy, of Glenlusk, in the Glenorchy district. The Apple was first known as Duffy's Seedling, and later as Democrat, but when it was recognised that another variety was in existence under this name it was subsequently re-named Tasma. The parent tree is still to be seen by those interested, situated in a gully on the property, and regularly bears good crops of fine fruit.

Tasma is one of the latest keeping, highly coloured, late varieties. It was this quality that was principally instrumental in bringing the Apple into prominence. Whilst not possessing the delicate flavour of other kinds, it is eagerly sought after for dessert purposes, its deep brilliant red colour making a very attractive display in the show window.

During the younger stages of growth the fruits produced are rather larger than the sizes which are in popular demand. This is a good fault. When the tree comes to full bearing, regular crops of the marketable sizes are produced, and the variety is not affected to the same extent as the smaller kinds under dry conditions.

The tree is markedly vigorous in growth, and possesses a peculiar angular habit that makes pruning and training rather difficult in the early stages. In order to secure early cropping, it is necessary that full use be made of the laterals. These should be encouraged, and only lightly pruned or shortened back to develop the fruit buds.

Tasma, compared with other varieties, can be classed amongst those Apples which are not particularly subject to fungus or insect pests. In the early stages of growth, it sometimes suffers from the attacks of woolly aphis, but this may be controlled by careful spraying, and when the tree is fully matured and the bark toughens, very little trouble is experienced from this pest. The Tasma is now extensively planted throughout Tasmania, and has also found a certain amount of favour upon the mainland. During recent years it has proved a popular variety for re-working unsuitable or unprofitable kinds, its vigorous growth making it very adaptable for this purpose.

The fruits command the highest market prices towards the end of the season, and will often bring up to £1 per case for choice lots. Owing to its keeping qualities, it is especially suited for cold storage purposes, and is often held until the end of December for the Christmas markets.

Crofton.

The Crofton was raised about the year 1870 by Mr. Joseph Cato at Mount Stuart, near Hobart. The records are not clear as to whether the variety was the result of direct hybridisation or a variation produced as the result of an ordinary seedling from the parent, Fameuse (Pomme de Neige).

Crofton is one of the best flavoured, coloured late-keeping varieties, and has been freely planted throughout the State.

The tree is not of vigorous growth, and is inclined to be "spindly," especially when planted on the poorer class of soils. The chief disability to which the Crofton is subject is a marked susceptibility to the Black Spot fungus, especially under humid conditions. The fruit when the trees reach maturity is also inclined to be small. The variety is classed amongst the smaller export Apples, and to attain a marketable size, careful attention must be paid to manuring and thinning. Crofton is now an established favourite upon the mainland markets, and, together with the Tasma, secures the highest prices towards the end of the season.

The variety keeps well in cold store, will not easily bruise, and is of attractive shape and appearance.

Tasman's Pride.

This is now becoming a very popular variety. During recent years it has been extensively planted throughout Tasmania, and is now attracting attention upon the mainland. "Tasman's Pride" was raised by Mr. Thomas Young, of Margate, toward the end of the last century, the original tree is still growing on the property and bearing crops of fine quality fruit.

The Apple, when ripened, is one of the most attractive varieties grown, and never fails to excite comment, especially when viewed upon the trees in the orchard, the brilliant red fruits amongst dark green foliage presenting a picture which is rarely forgotten.

Whilst not being classed as a keeping variety, it may be held for a fair period in cold storage, and is very similar to the Jonathan in this respect.

"Tasman's Pride" is essentially a dessert Apple, possessing a good flavour, besides being highly coloured and juicy. Another advantage is that under ordinary cultivation it consistently bears good-sized fruits, and will develop these better under dry conditions than the Jonathan and other varieties in the same class.

The tree is a very vigorous grower, being sturdy and well fitted to bear heavy crops of fruit. It is also less subject to Black Spot, Powdery Mildew, and other fungus diseases than most varieties. Under certain conditions, particularly where a close spur system of pruning is practised, it is inclined toward biennial cropping, but this is considerably modified where a good lateral development has been encouraged, and the trees have generally received fairly liberal pruning.

Duke of Clarence.

This variety has been extensively planted throughout Southern Tasmania, and is one of the principal early Apples that are exported to overseas markets.

"Duke of Clarence" originated as a chance seedling, which was found growing upon an orchard in the Huon district, belonging to a Mr. Coleman. The variety colours up early in the season, being much ahead of Jonathan, King David, and other dessert kinds.

Whilst not being a late keeper, it stands transport to European markets, and generally commands good to medium prices. The Apple possesses an attractive appearance, and bears regularly, but the flavour is very mediocre.

The tree is vigorous in growth, but rather susceptible to black spot. "Duke of Clarence" is an Apple which fills a place in the demands for the overseas trade, principally on account of its early colour and development, and no doubt will continue to do so for a period. Very few Tasmanian growers, however, would include it amongst their choice of varieties to-day, and with the advent of a good-flavoured early coloured variety, possessing vigorous growth and freedom from disease, its place would be seriously challenged.

Ranelagh.

The origin of this Apple is rather uncertain. The parent tree is generally recognised to have been raised in the Ranelagh district, one of the oldest specimens at present in cultivation being situated in Mr. J. Fletcher's orchard. The variety is very similar to the Scarlet Nonpareil in shape, colour, and quality, but the tree is much more vigorous in growth.

Ranelagh has been planted on a number of orchards in the Huonville district, but has never attracted much attention outside of this area. It is a good cropper, but the keeping qualities of the fruits do not compare with other varieties which ripen at the same perod.

Lalla.

This article would not be complete without mention of Tasmania's newest Apple variety. "Lalla" is the name chosen by the veteran Tasmanian nurseryman and orchardist, Mr. Frank Walker, for the handsome "bud sport" which originated on a tree of the "Delicious" variety at the Lalla Orchard, N.E. Tasmania. The Apple is very similar in shape to the parent, but the flesh texture is firmer, and the skin, instead of being striped, is of an even deep carmine.

The tree retains all the vigorous characteristics of the Delicious, and, although carrying a luxuriant deep foliage, the fruits develop their colour, whether borne on the shaded portions or the outside branches.

Although this variety has only been placed on the market this season, a number of trees has been planted, and under observation for the last eight or nine years. "Lalla" is a handsome Apple, which, when better known, has every indication of occupying a prominent place amongst the Tasmanian varieties.

Amongst other Apples of Tasmanian origin, Prince Alfred, Geeveston Fanny, and Coleman's Pearmain, may be mentioned. Prince Alfred is a culinary variety, which has been planted to a limited extent in the different districts, but is now not favoured, owing to its large size and tendency to develop "hollow core."

Geeveston "Fanny" is a very popular Apple, grown in the Esperance district. It is a good keeper, not a regular cropper, but makes up for this disability through its freedom from fungus disease. Under general cultural conditions, the heavy biennial yields make it necessary for systematic thinning to be practised if the fruits are to reach a good average marketable size.

Coleman's Pearmain is a very showy striped variety, that is principally grown in the Bagdad district. This is another variety that owes its popularity principally to its non-susceptibility to fungus disease. During recent years the Apple was used for grafting purposes in many orchards in which unsuitable or unprofitable varieties had been planted, but to-day it is being superseded by more popular kinds, such as "Granny Smith," "Tasma," and "Tasman's Pride."

VICTORIAN FRUIT MARKETING ASSOCIATION.

Increasing Membership.

On August 14, a meeting of growers was convened at Harcourt, by the provisional committee of the V.F.M.A., to explain the working details of this organisation. The provisional chairman and the secretary, explained the objectives, which were amplified by Mr. A. G. Lester. He was followed by Mr. J. B. Mills, who indicated that whilst there might be some good in the organisation, he preferred to wait before coming to a final decision. Several questions were asked, and answered by Mr. H. G. Colombie. Both Mr. J. M. Ward, Superintendent of Horticulture, and Mr. T. E. Butler, who were present, stressed the necessity for organisation. At the close of the meeting, when the chairman asked for an expression of opinion, no motion was moved either in favor of or against the organisation, and the meeting was adjourned for further consideration, until August 24.

The provisional secretary of the V.F.M.A., Mr. A. S. Harrison, attended the meeting on the latter date, when he read the proposed constitution. Some suggestions for amendment were made and noted. A resolution was then moved that the meeting approve of the organisation, whilst an amendment was proposed that the matter be deferred for further consideration. The amendment was lost, and the motion carried. A number of Harcourt growers then joined the organisation, and several more have since joined the V.F.M.A.

On August 28, a well attended meeting was held at Hastings, some 40 being present. The organisation was explained, and numerous questions answered. The formation of the V.F.M.A. was approved of, and most of those who were not members, then joined up.

On September 10, Drouin was also visited, and it is pleasing to record that practically all the Drouin and Warragul growers have joined the V.F.M.A.

More Victorian shippers have lately joined the organisation, the list now including the I.F.M. Co., F. Cave & Co., Dennys Lascelles Ltd., A. G. Lester, W. H. Archer, Barker, Green & Parke Pty. Ltd., F. R. Mellor, Esmond Russell Pty. Ltd., Parnham Pty. Ltd., and N. N. McLean Pty. Ltd.

A meeting of the provisional committee was held on September 13. Various matters were discussed, and the suggested constitution reviewed. A further meeting will be held at an early date, and a general meeting of all members will later be convened to finalise the constitution and elect the executive committee.

Inquiries regarding the V.F.M.A. have been received from Tasmania, South Australia, and Western Australia.

THE CHARGE OF THE APPLE BRIGADE.

(Season 1928.)

Half a leg, half a leg,
Half a leg backward,
Out from the Orchard there,
Stumbl'd he trackward.
"Forward the Pickers' Brigade!"
"Pick all the Apples!" he said:
With fruit cases everywhere,
They dared not be slackward.

"Forward the Pickers' Brigade!"
Was there a man dismay'd?
Not though each one of them knew
Nature had blunder'd:
Their's not to make reply,
Their's not to reason why
They must eat Apple pie:
Onward they went, without breath.
The Orchardist wander'd.

Apples to right of him,
Apples to left of him,
Apples on top of him
Volley'd and thunder'd.
What's to be done with them,
Small profit won with them;
There in the orchard beneath,
Ton upon ton of them;
May be a hundred.

Burn'd were his arms, and bare,
Grass seeds were in his hair,
Packing the Apples there,
Charging mosquitoes, while
Nobody wonder'd:
No time had he to smoke,
He would be stony broke;
Packer and picker
Reel'd from the frenzied stroke,
Shattered and sundered.
Then they strode back, but not,
Not he who had wander'd.

Apples to right of him,
Apples to left of him,
Apples on top of him
Volley'd and thunder'd.
Though full cases looked quite well,
What would the bank book tell;
What would he have to shell
Out for expenses?
As yet he could not sell—
All that was left of him.
No wonder he ponder'd.

When can his glory fade?
O, the wild sales they made!
Had he been plunder'd?
Were fortunes ever made
From fruits in the Apple trade?
"The best you can hope for," they said,
"A modest six hundred."

—"Yeboscar."

Queen's Building, North Parade,
Port Adelaide, 31/8/28.

SOME ECONOMIC THOUGHTS.

"AUSTRALIA'S FINANCIAL POSITION is alarming." So states the Prime Minister of the Commonwealth. Business men have been saying the same for months past, giving weighty reasons, and quoting the logic of figures.

We all believe the depression will pass, though there are some who believe things will get worse before they get better.

There is a great future before this fertile and, as yet, undeveloped Commonwealth, though it is apparent we have some national lessons to learn, and we have to pay for our mistakes.

There is not yet sufficient appreciation of the importance of our primary industries. The great mass of the people have not yet learned that the wealth of this country comes from the export of our primary products. This is reflected in our laws as well as the general outlook of the people. We are young in our nationhood. We are not alone among the countries of the world in the making of national blunders.

In this Pacific outpost of Empire, we suffer through having no near neighbors with whom to compare ourselves.

Much could profitably be written on this subject did space permit. Briefly then—how does this economic situation affect fruitgrowers?

Fruitgrowers in common with other primary producers, are caught in the depression because of misplaced national emphasis. The exporting primary industries—especially the wool industry, are now keeping Australia solvent, though yonder labor unionist or wharf lumper does not admit it.

Our Constitution provides for a Court of Conciliation and Arbitration —a grievous blunder. No other country in the world has followed our example. Australia—which is the same size as U.S.A.—is too big for one Federal Arbitration tribunal. The idea of a "court" for arbitrating between employer and employed, and conciliating people who don't want to be conciliated, is wrong. It has brought its fungus growth of strife-mongers. The Federal Arbitration Court has driven employer and employee apart, and has caused more strife than it has prevented. Fictitious standards have been set up.

A well-known fruitgrower, referring to the difficulties now confronting the canned fruit industry, summed the position up thus:—"We are trying to sell goods prepared under a £5 a week wage to folk who live under a £2/10/- per week wage."

Here are some of the major factors which have increased the cost of production to the detriment of producers: The Federal Arbitration Court, with its never-ending harvest of strikes; the "unscientific" tariff; the Sugar Agreement; the Navigation Act; the break of gauge on the railways; and the fact that the ever-rising costs of production place us at a serious disadvantage when competing in the world's markets.

Sir Benjamin Morgan, chairman of the British Empire Producers' Organisation, stated at Fremantle on the eve of leaving Australia:—

> That all industries in Australia were suffering from artificial standards of wages, and from conditions of hours, housing, etc., that had no relation to those of the labor employed in competing industries in other parts of the world. **This condition of affairs might have been very happy and ideal if the people of Australia had been able to live by taking in one another's washing.** But there was no country more dependent for her future prosperity upon export markets than Australia. Whereas the United States and other countries with large home-consuming populations only needed to export from 10 to 14 per cent. of their total production the Comonmewalth was compelled, whether she liked it or not, to export the greater part of her production in every primary industry. Yet she disregarded entirely the conditions pertaining to export trade. In the sugar, dried, canned, and fresh fruit and dairying industries she paid labor from two to five times more than did other countries exporting similar commodities. For this reason Australia would be faced, in the very near

future, with something like an industrial crisis, unless the Governments, not only continued to subsidise agricultural industries, but increased the subsidies to enable the industries to survive.

* * *

Sir Benjamin speaks of continued subsidies. The primary industries have sought this method of assistance to obtain the advantages of a protected home market.

Sooner or later, however, the economic position with regard to both primary and secondary industries in Australia, must be adjusted to world conditions.

* * *

We have the right climatic and soil conditions to produce food stuffs to feed the world. Yet many of our products cost more to our own folk than we sell them for abroad—and to get them abroad we are relying more and more on Government bounties.

The latest to join the bounty system is the pampered coal industry of New South Wales.

A responsible citizen, giving evidence recently before the child endowment commission quoted figures showing that the sugar and butter industries cost Australia £12,000,000 per annum.

At a time when we need peace in industry, and when every citizen should put his shoulder to the wheel, we have the spectacle of labor unions defying an award made in the Arbitration Court. The present senseless waterfront strike is an evidence of the harmful virus in our national blood.

Fruitgrowers and their fellow primary producers are suffering now from the general economic depression.

With that innate good sense which is the heritage of our conquering race, this great country will win through its troubles, and will yet achieve a great destiny. But we must pay for the errors of the past: there is no escape.

We have been complacent; we have mortgaged our future. "The mills of God grind slowly, but they grind exceedingly small."

Our national adjustments must be made. We cannot live unto ourselves. We are a part of the great world in which we live. In particular, a new era is dawning for the great Pacific region, of which Australia is so important a partner.

The primary producers have been called on to bear more than their share of the national burden. But it will be borne, and from their ranks there will yet rise men with that vision that sees things whole—the essential unity of capital and labor, the mutual interdependence of producer and distributor, the balanced prosperity of country and city.

Never was there a greater need for visualising the wholeness and unity of our national situation.

Strong, wise, farseeing leadership is necessary. Why should not our primary producers send from their ranks the men who shall give the effective leadership which is urgently necessary to build on a sure national foundation to redeem the errors of the past, to put us right in the eyes of the world, and to fulfil our great national destiny.

THE CALL OF THE WORLD.

Big Pageant at Melbourne Town Hall, from October 9 to 13.

A Challenge to Young Australia.

AT the request of the Australian Board of Missions, we publish details of their grand Pageant, "The Call of the World," to be held at the Melbourne Town Hall, from October 9 to 13. It will be an appeal to the imagination of Australia.

The centre of gravity for the world, state the organisers, is shifting to the Pacific, and already Pan-Pacific organisations and problems are arising in the industrial world. Australia faces a new world since the Great War, with new groupings of peoples and new commercial relations. What of the future?

"You cannot make a nation without religion," says Mussolini. Peace has come, and humanity is now entering on a creative period in history. Statesmen in every nation are calling upon the leaders of Christianity to help. The Government, the trader, and the missionary, are asked to co-operate in welding humanity into one brotherhood.

The gropings of ancient peoples for the Light, will be portrayed, the revelation of the Light of the World, and the founders of our British civilisation, will be put before us in picturesque groups. Then the history of the discovery of Australia, and glimpses of the pioneers of our land will lead up to the world problems before us. Is Australia to play her part in the formation of the new world?

What is Australia to do with the child races at home and in the islands round our shores? How are we to mould Papua, and the 750,000 natives of the Mandated Territory?

Can we face the making of a nation, however, against the teeming millions of China and India, of Japan and Africa? The task is vast enough to appeal to the latent energies of young Australia; it is difficult enough to overcome our love of ease and luxury; it is overwhelming enough to drive us back to first principles, to invoke again the unifying force of Christianity.

Missions are not the work of unpractical dreamers, but they have to do with the most vital and most practical interests of mankind.

Come, says the Australian Board of Missions, and learn the lesson of the Grand Pageant, and bring along with you the idealism and the optimism of young Australia. We are presenting Faith as an adventure, and the Australian generosity of faith will respond to the call. Common service and common sacrifice in the greatest of all adventures, will be the only way to make a lasting nation for Australia, and the only way to knit together all Pan-Pacific interests in one great Commonwealth of humanity.

The Editor's Correspondence.

OIL AND BORDEAUX SPRAY.

Experiment by W. J. Williamson, Portland, Vic.

(The Editor, "Fruit World.")

Sir,—I enquired from several as to whether it would be practical to mix red oil at full strength with the Bordeaux for the early spray. Apparently it was not generally practised, and I determined to try it out. The result has been satisfactory, and for the information of those like myself, who don't profess to know all about spraying, I give the method adopted.

Mix bluestone, pound to gall. in barrel. Quick lime, ditto—to make sure of lime properly slacking, I put first, tin of boiling water. Red oil—put ten galls. water in barrel and emulsify oil. Add water to make mixture, 1 gall. oil to five water. I do not add any soap, but if any difficulty with water, add a spoonful or two of soap extract. For each 40 galls. the vat holds, put 20 galls. water and start engine—add 6 galls. Bordeaux mixture—4 galls. lime—then 10 galls. of oil mixture. This mixes well.

The weather has hindered spraying to such an extent that the Jonathan blossoms are opening, and green leaves visible at the cuts. There is no sign of burning. If the sprayers cannot be trusted to keep nozzle away from limbs, then reduce pressure of pump to 150. The force the spray is driven is the cause of much burning.

I can see no reason why there should be any damage to the blos-

soms; if there is I shall pay for my experiment. If not, then it saves one spraying.

Perhaps someone with more experience may point out any objections.

(Signed) W. J. WILLIAMSON.

Portland, 19/9/28.

SUNKIST FRUIT EXTRACTORS.

Editor, "Fruit World."

Sir,—We notice that an enquiry has been made by "Queenslander" for information regarding Sunkist fruit juice extractors installed by the Victorian Railways Commissioners for the purpose of supplying the public with pure citrus drinks. These extractors are produced by the California Fruitgrowers' Exchange, and we have the sole agency for Australia. We would be pleased to supply any information required.

Yours faithfully,

Victorian Central Citrus Association Pty. Ltd.,

B. S. B. Cook,

Manager and Secretary.

360 Collins-street, Melbourne.

"LONDON'S MARKETING FACILITIES."

(To the Editor, "Fruit World.")

Sir,—

Permit me to draw attention to one point in the article under the above heading, on page 377 of your September issue.

After referring to the increased area of the market, it is stated:—"Spitalfields Market has the advantage that it is the only market, so far as the Superintendent, Major F. H. Millman recalls, which has a series of internal roads. This enables produce to be brought right up to the stands, and to be unloaded in a far shorter space of time than in other markets, where it has to be manhandled from the roadway outside."

As a matter of fact, the Manchester Wholesale Fruit Market covers an area of between five and six acres—nearly all under one roof—and wide roads, constructed for vehicular traffic, pass through the market at convenient points, and the roads are also intersected by passages, which give convenient, direct access to every stand in the market.

Presumably, Major Millman was unaware of this when he made the statement quoted, and it is due to the Manchester Market that this correction should be made.

Yours faithfully,

WM. JNO. WADE.

Bridge-street, Sydney, 18/9/28.

ELECTROCULTURE.

As we go to press, a letter is to hand from a New Zealand subscriber, enclosing the report of an official statement by the N.Z. Minister of Agriculture (Hon. H. Hawken), in the N.Z. House of Representatives, in which a recently-advertised system of electroculture is adversely commented on.

ETTERSBURG STRAWBERRY.

S. American Correspondent Was Told This Variety Had Revolutionised Strawberry-growing in Australia.

Experts Say No!

A correspondent from Buenos Ayres, S. America, writes as follows:—

"We see in the June number of your "Fruit World" (page 180), an article on "New Varieties of Strawberry Plants," and we are rather surprised to find no reference made to the Ettersburg Strawberry, which, we were given to understand, was by far the best Strawberry produced in Australia. In fact, for three years we have been trying to land live plants from Australia into the Argentine in order to push this class of Strawberry here. We were informed by a very old Australian grower that the Ettersburg had revolutionised the Strawberry trade, as it was a 'tree' Strawberry, which raised its crop off the ground, gave abundant and excellent fruit, and, really had wiped the other sorts off the Australian market. On these recommendations we have gone to some expense and trouble to get plants landed here alive, and have at last managed to do so, but your article would lead us to think that we have been misled, and we certainly do not wish to make a false recommendation to our Argentine clients who depend on our word, and we cannot 'let them down.' "

Answer (by J. B. Randell, Gumeracha, S. Aust.).—With reference to your correspondent's query re the variety known as "Ettersburg," and distributed with great flourish of trumpets as "Tree Strawberry." With me, it gave very disappointing results. It cannot, in any sense, be truly called a "tree"; the plant is a fairly strong grower; it carries its fruit, which is on the small side, off the ground fairly well, but does not satisfy me so far as fruitfulness is concerned, and, although I still have a few plants, I do not grow it to any extent. Later, there was introduced another of Etter's hybrids, known as No. 89. This variety produces a much larger berry, which is very firm, and therefore a good carrying fruit. Its drawback, however, in my experience, is that it only produces one crop, and no treatment that I have been able to give seems to make any difference in this respect.

After having tried out some dozen or twenty varieties which have been available during recent years, there is one, and one only, that I regard as satisfactory from a commercial viewpoint; that one is "Melba." It has proved a good cropper; with irrigation, it bears over a period of four to six months, and is quite a good-sized berry. Its drawbacks are that the plant does not stand our summer heat very well, being in this respect somewhat delicate; and the fruit is somewhat lacking in flavour.

New Varieties.—I think the suggestion regarding the importation of new varieties is a good one, and for the man who has time to give to it, it is a good plan to try raising seedlings; it is only in this manner that new worth-while varieties can be secured. Moreover, it should perhaps be remarked that a kind which is quite unsatisfactory in one locality, may under other conditions of soil and climate prove very satisfactory, and for this reason the only way to arrive at really reliable conclusions is for each grower to do some experimenting under his own conditions.

(Continued on Page 400)

Tasmanian Apples

Orders for Apples carefully handled and undertaken for all Overseas & Interstate Markets.

E. R. COTTIER & CO.

88 COLLINS STREET,

HOBART - - TASMANIA

Tel. add. "ERCOT," Hobart.

Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

Strawberry-Growing in New Zealand.

Varieties :: Site and Soil :: Cultivation :: Manuring :: Runners :: Mulching.

(By P. Everett, Orchard Instructor, Thames.)

Varieties.

THE varieties of Strawberry grown are innumerable, as the plant is readily raised from seed. It is not intended, however, to give a complete list or even a description of all well-known varieties in this article, but rather to deal with those that are grown commercially in New Zealand.

In most parts of Auckland Province the Marguerite is the principal one grown commercially. The berry resembles a blunt wedge in shape, and grows larger than most other varieties. When ripe the flesh of the berry is extremely soft, and therefore it cannot be considered a good carrier, being very susceptible to bruises. Its flavour is not equal to the best, but this fact is largely lost sight of by the average consumer, as the excellent appearance more than compensates.

In the extensive Strawberry gardens of Nelson and Hawke's Bay provinces the Melba variety predominates. The fruit is considerably smaller than that of Marguerite, and is conical in shape. It is superior to Marguerite in flavour and equal in firmness.

The Ettersburg variety is not uncommon in parts of the South Island, but is seldom found in the North Island, though it has been tested in most localities and in various soils. The berry is spherically shaped and is smaller than Melba. The flesh has a very firm texture, and therefore carries well. The flavour resembles that of a Pineapple, and must be considered excellent.

A well-known English variety, the Royal Sovereign, is sometimes met with in New Zealand gardens, principally in the South Island. While the flavour and size of this berry leaves little to be desired, it is not grown extensively, principally because it is not a heavy cropper in most Strawberry-growing localities.

N.Z. INSTITUTE OF HORTICULTURE, SIXTH ANNUAL CONFERENCE, HELD IN THE MUNICIPAL CHAMBERS, CHRISTCHURCH, ON AUGUST 22, 1928.

Delegates, Members, and Visitors.

Front Row (left to right)—Jas. Young (Curator Parks, Christchurch), F. C. Brash (President, N.Z. Fruitgrowers' Federation, Wellington), J. A. Campbell (Director), Hon. Sir Heaton Rhodes (representing the Government), Rev. J. K. Archer (Mayor of Christchurch), F. J. Nathan (President), Prof. H. B. Kirk (Chairman, Examination Board), C. Reece (Christchurch), A. R. Stone (Dominion Secretary), H. E. Morgan (Christchurch), H. L. Darton (Secretary, Canterbury Horticultural Society), David Tannock (Dunedin).

Second Row (from left)—L. Paynter (Orchard Instructor), S. G. Smith (Secretary, Canterbury Council, N.Z. Inst. of Horticulture), C. E. Foweraker (President, Canterbury Council, N.Z. Inst. of Horticulture), F. H. Hollingworth (Dunedin), J. Murray (Palmerston North), J. E. Mackenzie (Member Executive), Wm. C. Hyde (Horticulturist), W. Smith (Petone), F. S. Neville (Town Clerk), F. W. Cove (Papanui, Director, N.Z. Fruitgrowers' Federation), C. W. Corner (Napier), Ch. Pope (Christchurch), N. R. W. Thomas (Secretary, Auckland Council of the Institute), Jas. McPherson (Invercargill), A. R. Ragg (Christchurch), H. Hart (Dunedin), M. J. Barnett (Oamaru), A. M. O'Brien (Waincote), Rev. Rule (Christchurch), Geo. A. Green (Dominion Organiser), J. Macdonald, D. Harper (Timaru).

Back Row (left to right)—G. Halford, T. D. Lennie (Past President, Horticultural Trades' Association), W. W. Adams (Hastings), W. Wickens (Christchurch), F. J. Tapley (Governor's Bay).

A variety that has of recent years made its appearance on the Auckland markets is Captain Cook. In appearance, texture, and flavour this fruit is very similar to Melba, and when better known may become a very popular Strawberry. The fruit ripens slightly earlier than Marguerite, and plants give better results than the latter variety when retained for the second season.

The Everbearing is another variety that is seldom seen in our markets, but which appears to have outstanding qualities when grown under suitable conditions. The fruit is almost equal to Marguerite in size, and quite equal in flavour and texture. The class of soil best suited to the Everbearing appears to be a light sandy loam, which is unsuitable for many other varieties.

Laxton's Noble is giving good results where grown in the southern parts of the South Island, and is gaining popularity there on account of its size and appearance. The fruit resembles in many ways that of the Marguerite.

Many other varieties of Strawberries can be found growing in New Zealand, but none are of sufficient commercial importance to warrant a description here. Of the seven varieties named above, Marguerite and Melba surpass all the others as regards the quantity grown, consequently the remarks which follow will principally treat with those two varieties. It can be generally taken that Marguerite is the principal Strawberry grown in Auckland Province, and Melba in the more southern districts. However, a fair quantity of Melba has been grown in Auckland of recent years, and the variety is reported to be giving satisfactory results.

Site and Soil.

In selecting the site for a Strawberry garden, it must be remembered that the earlier in the season the fruit ripens, the greater the price that fruit will command on the markets. Consequently it is best to choose a warm site, preferably with a gentle slope towards the north or north-east, and well protected from cold winds.

Both the Marguerite and the Melba varieties will give excellent results when grown in a friable clay loam with a porous subsoil. However, they are not exacting, and many other classes of soil will often give results that leave nothing to be desired. Most varieties will not thrive satisfactorily on a very light or sandy soil.

Cropping Habits.

Strawberry plants have been known to survive for a period of ten years without transplanting, and when transplanted every alternate year will often endure for several years longer. For commercial purposes, the life of a plant may be considered as not more than three years. Variety, soil, and certain pests and diseases are all important factors in determining the profitable period. In Nelson district plants of the Melba variety can usually be left unmoved to advantage for a period of three years from the time of planting; but only in most exceptional cases, when the plants show particular vigour, will it be found profitable to allow them to remain for a fourth season. In gardens where the majority of plants have made poor growth during the first season after planting, or where diseases or pests have appreciably reduced their vigour, it is unwise to allow them to remain for the third season's crop. Most of the successful growers in Auckland Province consistently replant their gardens every season. Some growers in the district have been known to allow their plants to remain unmoved until after the second season's crop has been harvested, but the result in almost every case has been small-sized fruit.

Blooms are frequently produced in the winter and early spring months before the young plants have grown sufficient new roots to become firmly established. These blooms should invariably be removed as soon as they appear.

The Melba variety usually ripens its first fruits of the season at the beginning of November. This date, however, may vary as much as ten days either way, according to seasonal conditions and locality. The crop usually continues until about the third or fourth week in December, and sometimes later in the southern provinces. When a very dry season is experienced, the cropping period may be shortened by two weeks. Melba invariably produces a second crop annually, which commences to ripen about the first week of February, and often continues until April. While the second crop is spread over a much longer period than the first, and the fruit is usually of a superior size and flavour, the quantity produced is considerably less than in the first crop. When a very dry summer and autumn are experienced, the lightness of the second crop may make the gathering so expensive as to reduce the net value of the crop to a negligible amount. When a wet summer and autumn are experienced, the second crop may be expected to yield more than half the amount of the first.

The Marguerite variety yields only one crop annually, and the period over which this extends is usually from one to two weeks longer than that of the first Melba crop. The first berries to ripen will generally be a few days later in the season than with the other variety. The quantity of fruit produced by Marguerite compares more than favourably with the quantity of the main Melba crop, and frequently equals as much as both of the Melba crops combined. In this connection, it should be noted there are many different strains of Marguerite, some producing far less fruit than others. Therefore, growers when purchasing plants should exercise the greatest care to secure plants known to be of the best strain.

Cultivation.

The Strawberry is a plant that requires abundant moisture during the summer and autumn months, if a long cropping period is to be maintained. With this object in view, the ground should be kept in a fine state of tilth until the mulch is laid, so as to conserve the soil moisture and to give the air access to the soil round the plant roots.

Owing to the strong-rooting habits of the plant, deep cultivation is not advisable in close proximity to the foliage, otherwise valuable feeding-roots will be destroyed. Adjacent to the plants cultivation should be maintained to a depth of from 1 in. to 1½ in., which will prevent the roots from coming too close to the soil surface, as they invariably will if not kept down by constant cultivation. When the roots are close to the surface the plants are more susceptible to acute changes of temperature and moisture, consequently this condition should be carefully guarded against. Where rows are planted at a sufficient distance apart to allow the use of a horse-drawn cultivator, the ground should be tilled to a depth of 4 in., care being taken that the implement does not come within 9 in. of the plant on either side. Where hand cultivation is practised, it would be too expensive an undertaking to keep the soil tilled to this depth, therefore mulching must be relied on to conserve the soil moisture. A suitable horse-drawn cultivator for this work is one made in the shape of the letter V, and with which the angle can be readily adjusted to suit requirements; a row of very narrow tines, each 9 in. long and not more than ½ in. wide, to be fastened at equal intervals along each side of the V.

Manuring.

Strawberry plants respond readily to fertilisers, and in many of our most profitable gardens a payable crop could not be harvested without the application of some form of manure. The quantity and class of manure to be applied must necessarily vary considerably, according to the class of soil to be treated. Many growers in the vicinity of Auckland City apply annually 3 tons of mixed fertilisers per acre. Most South Island growers do not apply more than 1½ tons of mixed fertilisers. Nitrogen should be added to the soil, but only in such quantities as will stimulate the growth of the plant without causing excessive leaf-production. An excess of nitrogen will produce an abundant leaf-growth without a proportionate fruit-production. The use of phosphatic fertilisers alone will produce an excess of fruit for the size of the plant, and will not stimulate the growth of the plant sufficiently to give the greatest production of large-size fruit. Hence a combination of phosphate and nitrogen is necessary in order to obtain maximum results; when phosphate is in excess of nitrogen a firmer fruit will be produced. In addition to nitrogen and phosphate, potash should also be applied to most soils.

Nitrate of soda can be used to advantage when the fruit is maturing, or as a spur to lagging growth early in the spring. When the growth is normal, nitrate of soda should not be applied until the earliest berries have attained at least half their mature size, as this fertiliser tends to produce a too luxuriant leafage and also detrimentally affects the texture of the fruit. Three applications at fortnightly intervals are desirable. When the weather is dry, nitrate of soda may be given in liquid form. The proportion recommended is 1 oz. to two gallons of water, giving from 1 to 1½ pints to each plant.

When land is to be planted during the month of May, it should be given a final ploughing about two weeks before planting. Where cover-crops have been grown, the ploughing should be several weeks earlier. Immediately prior to this ploughing, manure—either organic manure or artificial fertilisers—should be applied evenly over the entire ground surface. Before planting, fertilisers can, in certain classes of soil, be sown in the small furrows that have been made to receive the young plants. As soon as the heavy winter rains have passed, and before the plants break into new leaf, a third application of fertilisers is desirable. With varieties that produce a second crop annually, such as Melba, fertilisers should be distributed around the plants immediately the early season crop has been harvested.

Many different classes of fertilisers are being used throughout the Dominion by Strawberry-growers, and with varying degrees of success, but blood and bone, superphosphate, sulphate of potash, Peruvian guano, and nitrate of soda usually give the best results. The following manurial scheme must be taken only as a basis on which to work out individual programmes, for as soils vary so must the manurial programme vary, if the greatest success is to be obtained. The figures given are for an area of one acre:—

When applied.	Blood and bone.	Super.	Sulphate of Potash.	Guano or Nitrate of Soda.
	Cwt.	Cwt.	Cwt.	Cwt.
(1) Before planting ..	8	8	2	..
(2) At planting	3	3	..	..
(3) In early spring ..	8	8	2	..
(4) Immediately prior to mulching	..	..	..	2
(5) After early season's crop is harvested, and when an autumn crop is expected	6	6	..	..

When application No. 5 is necessary, Nos. 1 and 3 may be reduced proportionately, so that the total will not be increased. In an established garden, Nos. 1 to 3 inclusive should be applied together in the early spring. In certain clay soils, No. 2 will cause a severe burning of the roots, and in localities where this trouble is experienced an application at the time of planting should be postponed until the first cultivation after planting.

No matter what quantity is applied, artificial fertilisers will not fully compensate for a lack of humus in the soil; therefore, it is essential to success that humus be supplied in some form or other. The ploughing in of a cover-crop serves this purpose satisfactorily. Leguminous plants are to be recommended, especially blue or white Lupin, which should be sown with 4 cwt. of superphosphate per acre. When stable or farmyard manure is available at a reasonable cost, however, it should be always given preference. When a heavy dressing of natural manure is given the application of nitrogenous artificials should be proportionately reduced.

The Strawberry is a plant that is considered to require an acid soil, consequently lime should not

be applied, nor any special treatment given to sweeten the soil, except that the ground should be kept fallow during the summer and autumn months prior to planting.

Runners.

Runners are usually produced in abundance on first-year plants, and if allowed to remain the growth of the parent plant will be considerably retarded, and will yield a proportionately small quantity of fruit if they are retained for the second season. Where new plants are required a sufficient number of first-year plants should be set aside for this purpose. These plants had best be prevented from fruiting; this will more than double the number, and greatly increase the size and vigour of the runner plants. It is worthy of mention that plants produced early in the season invariably give better results when planted out than plants produced in the late summer and autumn months, as the crowns of the latter are not sufficiently matured. The cutting-off of the spring blooms stimulates the production and growth of runners early in the season. When the single-row system is in operation, runners should be trained into every alternate alley, leaving every other alley free for cultivation.

Mulching.

Oat, wheat, or barley straw will be found most satisfactory for mulching. Pine-needles and rushes are sometimes used, but are not recommended when straw is procurable. Hay, also, is sometimes used, but owing to the great number of seeds contained therein, it is necessary to expose it to the weather until they have all germinated before it is distributed on the Strawberry beds. Mulches should be applied shortly after the earliest berries have set. The whole ground surface should be covered, including under the leaves of every plant. A good mulch helps to retain the moisture in the soil and keeps the fruit clean.

(To be continued.)

—From N.Z. Journal of Agriculture.

STRAWBERRY VARIETIES.

Continued from page 396.)

Re South American correspondent's enquiry as to the value of the Ettersburg Strawberry:—

Answer (by Henry Henderson, Mt. Evelyn, Vic.).—With reference to your S. American correspondent's remarks on Ettersburg Strawberries, and your enquiry re varieties most largely planted in this district, if not in Victoria. It is regrettable that such a report re Ettersburg Strawberries in Victoria should have been circulated abroad. To the best of my knowledge, this variety is not grown for commercial purposes. Small patches have been tried, and, though it carries a great quantity of berries, yet the size of such fruit is against its success.

So far, **"The Melba"** variety still leads, and I have grown it for 20 years. Its fruit is admirably suited for:—

(1) Punneting, i.e., fresh fruit markets and shop trade.

(2) Containers of 12 lb. for town and up-country orders.

(3) Factory lots, i.e., for preserving and essence purposes. I have sent annually a consignment of punnet fruit to Mildura for fete purposes for some 7 or 8 years, and these have ever arrived satisfactorily.

"The Sunbeam," once largely grown here and at Red Hill, also does well, but requires a heavier soil than that for Melba.

In the Ringwood area, this variety finds much favour. The fruit is inclined to be soft, and is easily bruised.

Wilson's Pride is gaining in favour. It is a good cropper, and does better on a grey loam than on the chocolate or red soils. It also is easily bruised, and requires care in punneting.

Rhodes variety produces large berries, though not so attractive as Melba, and rarely carries so prolific a second or autumn crop.

There are other varieties, but only small patches are being tried out.

Re varieties from abroad for testing purposes. Such investigation is best undertaken by the Horticultural Department, as information so obtained is more reliable than if left to the individual. I directed attention in the "Fruit World" to the need for investigation in this connection some years ago. The New South Wales Horticultural Department investigated two varieties I mentioned—one American and one English. Some eighteen months later they kindly forwarded the result, which showed that both had been "found wanting." I understand that the Victorian Department are now testing some varieties at Mt. Dandenong. I trust that the results will be published among berry-growers.

Answer (by Geo. Quinn, Chief Horticultural Instructor, South Australia).—The varieties of Strawberries grown here are Melba, Gandy, Sunbeam, Hackett's Giant, Sir Joseph Paxton, Royal Sovereign, and to a very small degree Ettersburg. The first named three or four sorts are much preferred.

I may say, Strawberry-growing is diminishing in this State owing to an undetermined disease, and the lack of summer rain, causing so many plants to perish each summer. Only those who can irrigate as desired, are continuing to cultivate this fruit with reasonable success.

In respect to the Ettersburg, I may say we have two varieties at our Blackwood State Orchard. They are both small roundish dark red colored fruits, with no particularly attractive flavor, but the plants are very prolific, and the berries make good jam. The better one is called Ettersburg 98. Neither of them are "true" types, and the claim that they lift their trusses of fruits high off the soil in tree-like fashion is all moonshine.

The late Dr. Holtze, when Director of our Botanic Gardens, imported scores of varieties of Strawberries, and when he passed the remnants of his collection over to this section, about twenty years ago, we had a couple of years later collected 172 varieties under name at Blackwood Experimental Orchard.

Unfortunately, by 1913, when we had worked up a row about a chain in length of each kind, two droughty seasons, 1913 and 1914 struck us, and in 1916 we reformed the broken ranks and salvaged only about 40 kinds, most of which were eventually lost. There were many useless, but also many promising sorts in that collection, but fate prevented us testing them out fully to the commercial stage.

I think the importation of new sorts should be undertaken—they are difficult plants to import, as they rot so readily in transit—and submitted to local test and selection.

Certainly a few good varieties have been evolved in the Commonwealth, but new blood or strain is always desirable.

[Replies from other correspondents will be published next month.

New South Wales

District News and Notes ∴ Cultural Hints

Interstate Conference—Effort to Regulate Market Supplies.

(By Our Correspondent.)

Mr. B. S. B. Cook, Secretary and Manager of the Victorian Central Citrus Association, and Mr. J. A. Parkes, Secretary and Manager of the Murray Citrus Growers' Co-op. Association, are on a visit to New South Wales, and are conferring with representatives of the citrus growers in the Mother State over matters of importance to citrus growers.

It is of interest to note that, although the production of citrus fruits in N.S.W. exceeds that of any other State of the Commonwealth, this is the first occasion on which a conference of interstate character has been held here in furtherance of citrus growers' interests. This incident may be taken as an indication of the advance that has been made of late in organising the industry in N.S.W. In many other matters, there is evidence that the efforts of representative Associations are bearing good fruit, and the attitude of the great body of growers towards co-operation of effort and closer organising is certainly much more favourable now than it has been for some considerable time.

One of the most important questions engaging the attention of the Interstate Conference is the evolving of some satisfactory system of regulating the flow of citrus fruits to the Melbourne markets.

Packing houses at Griffith, Yenda, Yanco, and practically all other centres, are now adopting methods that provide for a fairly well-regulated flow, and it is hoped that Leeton growers can be organised in a similar way. The last-mentioned place will be visited by the conference members, including Mr. Such, of N.S.W., with that object.

NAVEL ORANGES.

Supplies Falling Off.

There has been a marked falling off in supplies of navel Oranges at the Sydney markets during the past week or two.

Consignments from the irrigation areas are fewer in number, and less in quantity, and coastal supplies will soon be played out also.

This development has been reflected in the prices, which, on latest advices, had reached as high as 12/- per bushel case, the best figure of the season to date.

VALENCIAS NOW ON MARKET.

Consignments of Valencia Oranges are reaching Sydney from the irrigation areas, and it will not be long now till coastal-grown lots appear.

All citrus fruits, generally speaking, continue to show clean. There is a tendency towards undersizing amongst the Valencia crops, though later pickings may be of normal dimensions, if suitable rains occur.

The past two months have been dry ones in most districts, and on the coast, at least, hot westerly winds have made the soil very dry. Moderate rains would be welcomed in many places.

VALENCIAS FOR CANADA.

A shipment of 1,000 cases of Valencias was dispatched on 20th September for Vancouver, per the s.s. Aorangi. This is a repeat order from a very big firm of Canadian fruit merchants, and it is encouraging to note that earlier supplies gave so much satisfaction that a continuance of business has been secured from a market so near to the American sources of supply. The Aorangi shipment has been supplied through the Central Citrus Growers' Association Ltd., and has been packed according to standard American specifications.

Shipment for Singapore.

The Central Citrus Growers' Association have an order from a large cold storage firm in Singapore for dispatch in October.

SUNKIST JUICE EXTRACTORS.

Big Sydney Demand.

Sunkist juice extractors are taking on very well in Sydney, and it is expected that, before the end of the present summer, their use will be quite general. Some of the large city stores are installing trial lots, and if these prove advantageous, the possibilities must be very big indeed. A large-scale use of these most efficient extractors should help considerably to popularise the fruit drink habit, particularly if the installation of these machines could be made to synchronise with a well-thought-out scheme of advertising.

If publicity can be made to establish patent medicines upon the market, when, as invariably happens, their ingredients are like the proverbial sausage, a matter of mystery and doubt, surely fruit juices—Nature's own golden health-givers—are worthy of being brought to the public mind at every reasonable opportunity.

N.S.W. FRUITGROWERS' FEDERATION.

AT the meeting of the N.S.W. Fruitgrowers' Federation, held at Sydney on September 21, General J. Heane presided.

Citrus Exports.—It was decided, instead of sending two cases per acre, as suggested from Marayla, to request that citrus from experimental farms be used for further test shipments.

Fruit By-products.—Decided to request the Department of Agriculture to send an expert to U.S.A. to study the manufacture of cider, vinegar, Apple slice, and by-products of all fruits.

New Affiliations.—The organiser, Mr. G. H. Wilson, reported the following affiliations:—Binalong, Crookwell, Goulburn, Gunning, Merilla, Wingello, Yass and Berrima.

Apple and Pear Grading Regulations.—The Batlow Association requested a deputation to the Minister of Agriculture, urging the adoption of the amendments, of which the Federation approved. In view of the refusal of the recent Interstate Conference of Ministers of Agriculture to adopt these proposals, it was decided to endeavor to convert the other States in order that the matter might receive more favorable consideration at the next Ministers' Conference.

Fruit Barrows.—Decided to continue the agitation in favor of the retention of street fruit barrows.

Citrus Research Station.—The Department of Agriculture, in reply to request for a Citrus Research Station in the coastal district, advised that research work has already been commenced in improving varieties by bud selection, and part of the work will be carried out at the present experimental farms and in a nursery to be established at Narara.

Health Week.—The Secretary reported re Health Week in Sydney in October, and a Health Exhibition in the Sydney Town Hall, November 5 to 9. A Committee was appointed to consider the best manner of impressing the advantages of a greater consumption of fruit.

Analysis of Manures.—It was decided to endeavor to obtain the use of bags of standard weights for marketing fertilisers.

Analysis of Spray Materials.—It was decided to recommend that the analysis of spray materials be marked on containers.

Export of Grapes.—It was pointed out that there is at present no requirement in export regulations of any standard of weight in Grapes packed for export, and it was decided to establish a standard in this direction.

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

Executive.—Messrs. Tonking and Wark were elected as Vice-Presidents. Messrs. Dunstan, Such, and the President were appointed as an Executive.

Advertising of Citrus.—Proposals for advertising citrus were endorsed, subject to sufficient money being available. Circulars have been prepared, and agents requested to include a copy in account sales to growers, but growers, if they so desire, may forward contributions direct to the Federation.

It was decided that if promises of sufficient fruit to enable the sum of £500 to be collected, be forthcoming by the end of September, the scheme be proceeded with, otherwise the matter to lapse.

Annual Citrus Show.—The Department of Agriculture advised having requested the Royal Agricultural Society making annual citrus shows as an adjunct to the sheep show at the end of July, and it was decided to cooperate.

Cool Storage.—Reported that the Department of Agriculture is making arrangements for Mr. Broadfoot to visit Victoria at an early date to study fruit cold storage methods.

Red Scale.—The Secretary reported that a proclamation was gazetted, providing for the compulsory treatment of citrus trees for red scale.

Quarter Bushel Case.—The Secretary reported that the new quarter bushel case measuring 11¾ x 9 x 5¼, as recommended by the annual general conference, has now been approved and added to the list of fruit cases.

Single Cases of Fruit.—The Railway Commissioners advised having altered regulations to provide for freight on single cases being payable at station of delivery on payment of additional 25 per cent.; this not to apply to unattended platforms.

Cherry Slug.—Decided to ask Department of Agriculture to give publicity to control measures for Cherry slug, instead of requesting compulsory spraying as suggested by Batlow.

N.S.W. Orchard Notes.

Codlin Moth.

Before these notes appear, the first or calyx sprays for codlin moth should have been applied in earlier districts. In later districts, the first application should be made this month.

As this is one of the worst pests growers of Apples and Pears have to contend with, measures to control it should be vigorous, timely, widespread, and concerted, otherwise the pest will not be adequately controlled.

A thorough inspection of bandages, used cases, and packing sheds should be made, and sheltering grubs destroyed before emergence. Every orchardist knows the value of bandages, which are used by grubs in search of shelter. Every 14 days the bandages should be inspected and sheltering grubs destroyed. Loose bark should be removed, and the butt of the tree at ground level inspected.

Since all blooms do not open simultaneously, and all petals do not fall at the same time, it is often advisable to give a double calyx spray. The first spray should be applied with force enough to drive the poison into the calyx. The exact quantity of lead arsenate prescribed should be used, and the mixture well agitated before and during spraying.

The season for spraying for codlin moth is short, and the situation must be faced resolutely; there must be no "watching the clock" for knock-off time. It does not pay to grow weary on this job.

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

"YARRA"
BRAND
SPRAYS
PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street / 155 Yarra Street } Abbotsford, Vic.
Tasmanian Agents—
M. L. HOPKINS, HOBART

Black Spot.

In localities where trees are susceptible to black spot, growers should minimise or prevent trouble by timely spraying. Lime-sulphur or Bordeaux mixture has proved efficacious, and will keep the fungus in check.

Apples and Pears are very sensitive to Bordeaux mixture, if applied in the calyx stage, consequently the application of that fungicide should be avoided, unless it is absolutely necessary to use it.

Growers who use benzine cases for packing boxes should see that holes for the free circulation of air are bored. In many districts this season, black spot developed extensively on Apples stacked in boxes that were not ventilated.

Aphis.

A vigilant watch should be kept for aphides on Japanese Plums, Nectarines, Peach, and Cherry trees, and if the pest is noticed, trees should be sprayed with tobacco wash, or one of the commercial nicotine extracts. In applying the spray, use a high pressure, and repeat the operation, if necessary, in two or three days.

BRISBANE

F. B. BOLTON & Co.
ALBERT HOUSE,
BRISBANE.

Brokers and Selling Agents for
FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

We sell to wholesale Distributors only, and do not handle growers' consignments.
We act as Railway Freight Agents for growers' joint truck loadings, and secure lowest freight rates.
On Forward Sales of fresh fruit we act for sellers and collect cash in exchange for delivery order.

COVENT GARDEN,
LONDON
Ridley, Houlding
& CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.,
Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

Disbudding.

Grafted or budded stocks need careful attention, and the wise orchardist will periodically examine those put in during the previous summer. The object is to see that growths from the stock do not rob shoots from the graft or bud.

Some shade for the stock, particularly when old trees have been budded or grafted, is desirable, and consequently all shoots from the stock should not be removed. Better to pinch back some of the weaker shoots, so they may shade the stock until the grafts or buds form a head. Sometimes scions fail, and to meet such a contingency, ample shoots from the stock should be left and budded later.

The Cultivator.

Cultivation will assist in conserving moisture and make the soil fit to receive and hold showers yet to come. The soil around the trees should be kept in good tilth. No observant grower fails to recognise the value of good cultivation.

Surface Drains.

Surface drains must be made to carry off excessive water, and they should be so distributed that they will do so with the least possible loss of soil or dissolved plant food.

(Summary of notes for October, by C. G. Savage and H. Broadfoot, in "N.S.W. Agricultural Gazette.")

Rice Marketing Board.

The Rice growers on the Murrumbidgee irrigation area, have decided in favor of the constitution of a Rice Marketing Board.

TREE RECORDING CHARTS.

A chart, by means of which four years' yield performance of each tree in the orchard can be seen at a glance is on exhibit on the Better Farming Train, and growers who studied that chart will do well to start the compilation of one on similar lines. Not only will such a chart show which trees are the best yielders over a given period, but it may suggest a reason for such a difference.

In every successful business the unprofitable and barely profitable branches must be definitely determined, and unless such a checking system is instituted in citrus production many trees may be cultivated perpetually at a loss.

The simple chart suggested is made by ruling a large sheet of paper into squares. Each intersection of the lines—that is, the corners of the squares, represents a fruit tree. The squares should then be ruled into smaller squares by lines (perpendicular and horizontal) running through the centres of the original squares. Thus, around each corner of the original squares—each corner represents a tree—are four small squares.

Just prior to commencing the harvest, an inspection of the trees the yields of which are to be recorded will enable a very fair estimate to be made, which figure should be entered in one of the small squares around the tree represented. The corresponding square for the next tree should be filled in likewise, and so on.

Fruit Shipments
United Kingdom
and the Continent
W. D. PEACOCK
& CO.
24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

TASMANIA
Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.
Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.
Correspondence Invited.
H. JONES & CO. LTD.,
HOBART

In the second year another square is filled in around each tree, so that eventually four years' performances are seen at a glance.

Besides serving as an indication as to which are the most productive trees, the information will usually convey suggestions for improving the unprofitable trees—by using increased amounts of fertilisers, attending to drainage troubles, or re-working over to better types with selected bud-wood as mentioned above.—Department of Agriculture.

VICTORIA.

Crop Prospects ∴ District Reports.

Seasonal Report for the Month of August, 1928.

Deciduous Fruits.

The latest reports from fruit districts indicate that a medium crop of Apples and Pears is showing for next season (states Mr. J. M. Ward, Superintendent of Horticulture).

There has been no important development to record since the July report.

A special effort is being made to increase the sales of Apples held over in storage from last season's crop.

Owing to the late summer rains, Quinces were badly attacked by the brown rot fungus, and a general warning has been issued to growers to collect and destroy the diseased "mummies," as the majority of them are unaware that the shrivelled fruit is a carry-over of the disease, and consequently a menace to the stone fruit crop.

Viticulture.

August was a dry month. In view of the abundant rains of the first few months of the year and the fair falls that have since occurred, there is no cause for alarm; but, unless further rain falls soon, vineyards that are not irrigated can scarcely be expected to yield heavily.

In the irrigated districts, the August irrigation is being very generally applied. Its favourable influence on the bud burst is receiving due recognition.

The dry conditions have been very favourable to vineyard work, which is well forward throughout the State.

Citrus.

There is an urgent need for rain in all the citrus areas. Fertilisers have been applied liberally this season, and in some districts irrigation has been practised. Citrus trees generally are looking well, and there is a promise for an abundant blossoming.

The navel crop is being harvested, and in the Goulburn Valley and Rochester areas a very heavy crop is being harvested of excellent pulp quality.

The Lemon crop is about normal, and good prices are obtainable, both in the market and factory.

GIPPSLAND FRUIT MARKETING ORGANISATION.

Successful Export Season.

"Opossum" Community Pack Satisfactory.

Members of the Gippsland Fruit Marketing Association, comprising orchardists from Narre Warren to Bunyip, who had set up a guaranteed standardised pack under the "Opossum" label, met at Pakenham on September 14, to review the 1928 season.

Mr. H. G. Colombie, who acted as distributor of this new community pack, said it had been favorably accepted by traders. Special orders for the "Opossum" brand had been received from many traders, one large order coming from as far away as Roumania, and others from Finland and Austria. Prices reached from 6d. to 1/4 above the average price of other brands. Much of the success of the district pack was due to the work of the inspector appointed and paid by the growers—Mr. Geo. Grant. To finance this inspection, the orchardists concerned agreed to pay a levy of 1d. per case on all fruit exported under the district label. This sum, and a small profit made on the sale of the labels, were not only sufficient to pay for the inspection, but

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England, the Continent and New Zealand.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

MANCHESTER

(40 Miles Inland)

Is the Nearest Deep-water Port to BIRMINGHAM, BRADFORD, COVENTRY, HALIFAX, HUDDERSFIELD, LEEDS, LEICESTER, NOTTINGHAM, SHEFFIELD, STOKE, and over 200 cities and towns in England's greatest industrial area.

The Bulk of Australian Fruit Is Landed in London

yet the population of the North and Midlands is greater by some millions than that of the South of England.

GROWERS AND EXPORTERS PAY THE BILL!

For Handling and Transport Charges and Deterioration of fruit despatched from London to the North for re-sale.

Official records of prices prove

There is no Better Market than MANCHESTER

and the Port, Dock, Sale Room and Forwarding facilities are

SECOND TO NONE.

Ensure Minimum Charges and Maximum Results

By Direct Shipment to Manchester Docks.

Address enquiries as to opportunities for direct trade to:—

W. J. WADE, Representative of the Manchester Ship Canal Company

8 BRIDGE STREET, SYDNEY, N.S.W.

Cables and Telegrams:— **"Portoman," Sydney.**

had left in the hands of the Association, the substantial sum of £116.

Growers could realise how easily an emergency fund could be built up, where everyone contributed pro rata, according to the interest he had in the shipments.

During the 1926 season, 55,000 cases had been exported under the "Opossum" label. It was necessary to increase this quantity, so as to have a continuous supply before buyers. There was no doubt that this quantity would be greatly exceeded in the near future.

There was some discussion about the best way to prevent the rough handling of the fruit on the wharves, and during loading into the ships' holds, and politicians will be asked some pertinent questions at the forthcoming elections.

Legal Registration.—It was decided to legally register the Association, thus to protect the brand it has made favorably known.

At the close of the meeting, Mr. H. G. Colombie received the thanks of the members, for the assistance he had given throughout the season.

The Hon. Secretary of the Gippsland Fruit Marketing Association, is Mr. F. Thomas, M.A., Bunyip, Vic.

Narre Warren.—The rain which fell in September was helpful. Pear trees bloomed nicely, and fair crops are expected. Bud development is satisfactory on Apples, but after the heavy crop of last season only a medium crop is expected for the 1929 harvest.

SPRAY NOW FOR APHIS.

The indications are that this is likely to be an "aphis year," according to a recent departmental reminder regarding control. Green Peach and black Cherry aphis are hatching abundantly from the overwintering eggs, states the N.S.W. Acting Entomologist, and black Peach aphis is also in evidence. If serious damage later in the season is to be prevented, application of control measures should not be delayed.

It will be too late now to apply the miscible oil spray recommended for use before the bursting of the buds, but orchardists are advised to keep a close watch on their trees, and if aphids are observed in even small numbers, to spray with nicotine sulphate at the rate of one pint to 75 gallons of water, plus 3 lb. of soap.

It may be necessary to repeat the application of this spray several times during spring and early summer, avoiding the period when the blossoms are fully open, unless the infestation is so severe that the setting of the young fruit is likely to be seriously affected.

CALIFORNIAN FRUIT CROPS.

Final Check of 1927 Season of Peaches, Apricots and Pears.

Interesting Canning Figures.

SOME HIGHLY INTERESTING statistics are to hand from America, by courtesy of the U.S.A. Bureau of Agricultural Economics, in co-operation with the Californian Department of Agriculture.

Peaches.—A final check of the 1927 crop of Peaches, shows a total production of 492,000 tons of all varieties. In 1926 the total production was 541,000 tons. There were 322,000 tons of Clingstone Peaches produced in 1927, of which 230,000 tons were canned, 27,000 tons shipped to out-of-State markets or consumed locally, and about 65,000 tons wasted.

The production of Freestone Peaches amounted to 170,000 tons in 1927, of which 95,000 tons went for drying, 7,500 tons canned, and 67,500 sold fresh. It is estimated that by 1931 the bearing acreage of Clingstone Peaches will be about 23 per cent. greater than the bearing acreage of 1927. The bearing acreage of Freestone Peaches will show very little change.

Apricots.—There were 208,000 tons of Apricots produced in California during 1927. This was the second largest crop ever produced. Furthermore, it was 32,000 tons above the production of 1926. Out of the 1927 crop, 57,000 tons were canned, 137,000 tons were used in drying, and 14,000 tons shipped east or consumed within the State. An increase of about 16 per cent. is expected in the bearing acreage in the next four years.

Pears.—California produced 181,000 tons of Pears in 1927, of which about 89 per cent. were Bartletts, and 11 per cent. fall and winter varieties. In 1926 there were 207,000 tons harvested of all varieties. There were 51,000 tons of Pears canned from the 1927 crop, 98,000 tons shipped to out-of-State markets, and 32,000 tons dried and consumed locally. The bearing acreage of Pears has been increasing at a fairly rapid rate, and will continue to do so for some years to come, because in 1927 the non-bearing acreage still made up about 37 per cent. of the total acreage.

Production and Value of Specified Fruit Crops. 1923-1927.

Crop.		Farm value Production.	Unit.	December 1. Per Unit.
Pears	1927	181,000	Tons	£11 5 0
	1926	207,000	„	7 5 10
	1925	181,000	„	10 16 8
	1924	133,000	„	13 15 0
	1923	133,000	„	10 8 4
5-year average	1923–27	167,000	„	10 8 10½
Peaches	1927	427,000	„	5 4 2
	1926	541,000	„	8 2 6
	1925	394,000	„	7 10 0
	1924	330,000	„	7 5 10
	1923	380,000	„	5 0 0
5-year average	1923–27	414,400	„	6 14 0
Apricots	1927	208,000	„	10 17 6
	1926	176,000	„	13 2 6
	1925	150,000	„	11 5 0
	1924	142,000	„	9 11 8
	1923	210,000	„	5 4 2
5-year average	1923–27	177,200	„	10 1 5

*i.e., short tons of 2,000 lbs.

Comparative Packs of Canned Fruits.

Year.	Apricots, Cases.	Peaches, Clingstone, Cases.	Pears, Cases.
1921	1,150,514	4,162,849	872,396
1922	3,569,918	7,844,912	1,712,773
1923	1,562,298	6,591,335	1,181,565
1924	2,050,405	5,366,598	1,444,623
1925	2,196,680	9,258,587	2,315,600
1926	3,390,418	13,654,758	2,044,414
1927	3,116,713	10,829,681	1,929,805

The total bearing acreage of Clingstone Peaches in California, according to the 1928 report, is 83,959 acres. Total non-bearing acreage, 15,103 acres. This figure consists of 4,991 acres planted in 1927, and 10,112 acres that had as yet to come into bearing.

Pears.—The total bearing acreage of Pears is 62,521 acres. Total non-bearing acreage, 14,818. The non-bearing acreage includes 2,850 acres planted in 1927, and 27,380 acres that have not yet reached a stage of productivity.

REBATES ON SUGAR.

The export sugar rebates as from September 1, 1928, have been fixed at the following amounts:—£12/15/- per ton for fruit products; £19 per ton for other goods.

FRUIT IMPORTATIONS.

According to the statistics compiled by the Commonwealth Bureau, the value of fruits imported into Australia during 1927-28 was:—Dried, £182,959; fresh, £63,937. Fruits and vegetables preserved in liquid, imported into Australia during the same period, was valued at £226,245.

CRUSHED PEACHES.

A New Product.

As a result of experiments, a new product in the form of crushed Peaches, is the latest effort on the part of American canneries to dispose of surplus fruit. The big advantage of the new method is that it finds a market for small fruit which would be difficult to dispose of in ordinary business. The Peaches are crushed before canning.

The success that crushed Peaches has already attained in U.S.A. is a sure sign of it being a "winner" for the canneries.

There appear to be many advantages in processing Peaches in this way. The preparation is not difficult or costly, and fruit canners have most of the necessary equipment—additional equipment is not costly. The usual difficulties encountered when placing a new production on the market are not expected, as the crushed Pineapple trail has been already blazed, and the uses of crushed Peach are similar.

Packs were put up as far back as 1920 of various canned Peach products; dehydration was tried, canning spiced Peaches, sliced Peaches thickened with starch for pies, Peach preserves, cubed Peaches, Peach cocktail, Peach syrup, Peaches for glace purposes and taking a leaf from the book of experience of the Hawaiian Pineapple canners, they put up quite a pack of crushed Peaches. And of all these products two stand out as having commercial possibilities. They are spiced or pickled Peaches and crushed Peaches.

AUSTRALIAN CANNED FRUIT.

The Australian Fruit Canners' Association reports, under date September 19, 1928, that the following sales of Australian Canned Fruit were effected in Great Britain during the week ended September 15, 1928:—

	Cases.
Apricots	316
Peaches (halves)	1,682
Peaches (sliced)	2,140
Pears	185
	4,323

HAMBURG
(GERMANY).
Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

F. W. Vear
Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
MELBOURNE, VIC.
Highest Market Rates Assured
Prompt Settlements

The total sales from the commencement of the season to September 15, are, therefore, as follows:—

	Cases.
Apricots	33,207
Peaches (halves)	130,684
Peaches (sliced)	50,471
Pears	63,523
	277,885

CANNED FRUIT.

Big Australian Pack.

Estimates prepared by the Markets Department show that for the present fruit season it is expected that the unusually large pack of 20,000,000 cans of fruit will be available for consumption within Australia, in addition to the fruit prepared and approved for export. Plans for the disposal of the fruit within Australia have been submitted to the Canners' Association and the Victorian Grocers' Association by the Minister for Markets (Mr. Paterson), as the outcome of a conference held in Melbourne.

Mr. Paterson suggested to the Canners' Association that a levy of 1d. a dozen tins should be struck to provide a fund for an intensive publicity campaign. The amount raised would be approximately £7,000. It was proposed also that the canners and grocers should adopt the lowest price at which the fruit could be sold as a standard for the domestic pack, so that it would be possible for householders to obtain good fruit at uniform prices throughout Australia. About 10d. a can was the price suggested. The bulk of the domestic pack consists of Peaches. It is claimed that a few years ago a publicity campaign raised the consumption of canned fruit in the Commonwealth from one tin to three tins a head, although that level has since not been quite maintained.

WHO WILL SUCCEED?

"Growers who have good orchards should hold on to them, provided they know their business, are favourably situated with regard to handling and marketing, and are willing to adopt every reasonable method to hold down production costs and still have high yields and good quality. Such growers will undoubtedly weather the storm. But for the city speculator, the unskilled, the incompetent and the unfit, no hope is offered. The sooner they realise their true position and make a change in their farming programmes the less they will stand to lose."

The foregoing is an interesting comment on the general fruit situation in California, as made by the staff of the College of Agriculture, University of California, in a recent circular. In a general sense, these remarks apply with equal force to Australia.

SALES OF JUICE EXTRACTORS INCREASE FRUIT SALES.

More than 46,000 Sunkist juice extractors have been sold by the advertising department of the California Fruitgrowers' Exchange, Los Angeles, at the present time. This means not merely selling the machines, but also selling the fruit which the extractors are to turn into fruit juice for drinking. The management estimates that the sale of these extractors will mean sales of 1,500 cars of Lemons and 4,500 cars of Oranges during 1928 for drinking fountains where the fruit would not be used otherwise.

A smaller extractor, electrically driven, designed for home use only, is called the Sunkist Junior. More than 4,000 of these machines have been sold and about 1,200,000 reamers of various kinds for kitchen use have been distributed.

A monthly publication, called the "Sunkist Extractor News," is sent monthly to owners of the extractors, with recipes for new drinks, suggestions for improvement of service for fresh fruit drinks, and offers of display material.

Established 1896.
Cooksley & Co.
Fruit Agents.
Fruit Exchange, Brisbane
Consign to the Agents with years of experience, who guarantee Fruitgrowers the best of Attention and Satisfaction.
Selected Tasmanian and Victorian Representatives.
Reference: Commercial Banking Coy., of Sydney,
Bank of Victoria.
Shipping and Railing, No. 29.

GENUINE
"Black Leaf 40"
IN
10lb. & 2lb. tins
DISTRIBUTORS
The PRODUCERS' DISTRIBUTING Society Limited.
SYDNEY and MELBOURNE

Tasmania.

Orchard Notes - Export and Interstate Trade - Association Reports

ORCHARD OPERATIONS are now well in hand. Most growers have completed their early spraying and cultivation, and the areas are assuming a neat and business-like appearance.

Whilst it is yet too early to determine the prospects, the general indications point to only a medium blossoming, varieties which bore heavy crops last season being very patchy and showing below the normal bud development. Fruitgrowers are generally concerned with the increased infestation, which is evident in the red spider pest, and the majority of Apple-growers have applied the late dormant miscible oil sprays in order to destroy the overwintering eggs of this insect.

The past winter has proved one of the mildest on record, and the trees have come into early growth. A good deal of rain has fallen throughout the N., N.E., and N.W. districts, and cultural works have been somewhat delayed.

In the South, much drier conditions have been experienced, but the weather has been more variable, warm, sunny days being followed by cold, windy weather. These conditions prevailed at the blossoming periods of Apricots and other stone fruits, but the general effects upon the setting are not yet evident.

Apple shipments are still going forward to the mainland, but are practically confined to late varieties that have been held in the packing sheds under ordinary storage conditions, and very little fruit has yet been withdrawn from cold store.

The total quantities shipped to the mainland markets to date approximate 1,200,000 cases. It is estimated that 171,700 cases are still held in cold store, and about the same quantity in the growers' private sheds.

Apple Shipment to South America.

Reports received from Buenos Aires in connection with the trial shipment of Tasmanian Apples, which were forwarded by the s. Port Denison, indicate that they arrived in good condition, and were sold at satisfactory prices.

It is evident by the prices received that the popular taste on these markets is for the large red-coloured Apple, the highest returns being received for Delicious (21/-), Tasma (Democrat), 17/6. Other varieties sold at from 12/- to 14/- per case. It is understood that the freight and charges on this shipment will amount to about 6/3 per case, which will leave a good margin to the exporter. An endeavour is being made to secure a number of vessels toward the end of next season for further shipments, and it is hoped that these markets will ultimately provide a valuable outlet for the late-keeping coloured varieties.

Apple and Pear Exports to New South Wales.

Advice of a disturbing nature was recently received from the President of the Associated Selected Agents, Sydney, in respect to Apple and Pear shipments from Tasmania to the N.S.W. markets. The President (Mr. A. J. Cooper) has been notified that it is the intention of the N.S.W. Government to ask agents to furnish returns of the produce and fruit sold for two years on account of Tasmanian growers for the purpose of income taxation.

The tax is to be assessed on the basis of 5 per cent. of the gross sales being considered the income, and the rate to be 9d. in the £1 up to £250, thence increasing to 3/- in the £1.

Fruitgrowers are very much concerned at the new impost that is to be placed on their fruit, especially as

Yield
Quantity
And
Quality

These two very important features in successful fruit growing are assured if you rely on Goodman Trees. We have an exceptionally wide range of varieties as listed in our

FREE CATALOGUE

all of which will give finest results under all climates.
Special care in packing guarantees arrival of Goodman Trees in perfect condition. Advice and quotes gladly supplied.

Write for booklet now.

C. J. GOODMAN

Picnic Point Nurseries

BAIRNSDALE - P.O. BOX 47, VIC.

(W.—McF.)

FOR BETTER FRUIT
Use

Paterson's Concentrated

"CLENSEL"

Insecticide and Fungicide

at every stage of Growth

NON-POISONOUS
NON-INJURIOUS
NON-INFLAMMABLE

Literature on Application
A Trial Solicited with Confidence

CLENSEL PTY. LTD. 184-6 QUEEN ST., MELBOURNE, C.1.

Central 2654

the present charges, when totalled, leave very little margin of profit in a normal season. It is also considered that such a tax would be against the intention of the Federal Constitution, as it would place the N.S.W. grower in a more advantageous position in selling his fruit on the home markets. The most extraordinary feature is that the tax is to be brought into effect after twenty-eight years of Federation.

ADVISORY BOARD MEETING.

TASMANIA.

A meeting of the State Fruit Advisory Board was held on August 28th, Mr. B. J. Pearsall, M.H.A., presiding.

State Brand for Fruit Cases.—It was decided to allocate £100 to provide special labels for exporters who comply with specified packing conditions. At first the new scheme will be on an experimental basis.

Executive Committee.—An Executive Committee was appointed, as follows:—Messrs. B. J. Pearsall, M.H.A., N. Campbell, M.H.A., F. Peacock, A. Davies, J. P. Pigott, M.H.A.

Conference Resolutions.—It was decided to arrange with various bodies, as decided by the Annual Conference.

Consolidated Charges.—Consideration was given to the resolution from the Conferences in regard to the elimination of all unnecessary charges in the English consolidated charges. The Secretary was instructed to forward the resolution by cable to the Agent-General, together with a request that he meet the National Fruit Federation and place the views of the industry in this matter before the members with a view to obtaining elimination of the charges considered unnecessary next season.

Enquiry Commission Requested.—It was agreed that the resolution requesting the Federal Government to direct the Development and Migration Commission to enquire into the charges and commissions received by shipping agents, be forwarded to the Federal authorities.

Seasoned Timber.—It was decided to recommend growers by advertisement to place their orders for case materials to ensure that the cases are seasoned when exported.

Pre-cooling of Fruit.—As the Fruit Expert recommended that there should be an experimental shipment before growers undertook the expense of wholesale pre-cooling, it was decided to ascertain the cost of pre-cooling 20,000 cases for an experimental shipment.

New Zealand Export Methods.—It was decided to request the N.Z. Fruitgrowers' Federation to arrange for a visit to Tasmania of their London representative (Mr. Stephens), to discuss with the Board the methods and results of the export scheme in New Zealand.

Resignation of Brisbane Agent.—The resignation of Messrs. Stanton Bros. from the Brisbane Committee of Agents was accepted.

Seedling v. Northern Spy Stock.

Tasmanian readers are following with keen interest the vigorous discussion on the Apple stock question.

Mr. P. H. Thomas, Senior Horticulturist, writes:—

"I noticed that one of your contributors was very much exercised over the fate which he considered awaited the growers in Tasmania who were planting out orchards on 'seedling stock.' We have given the matter a lot of consideration here, and after weighing up the experiences and evidence of the last 25 or 30 years, favour the tree which has been raised upon selected seedlings."

Danger of Woolly Aphis on Seedling Stocks.

(To the Editor, "Fruit World.")

Sir,—In the "Fruit World" of June 1, page 228, I see Mr. D. Pfrunder's letter, re seedling stocks. I have been following orchard work for over 71 years and therefore I am able to speak a word or two on the subject. When I was a lad I had a nursery, I grafted all my Apples on seedling stocks. About the year 1865 to 1870 the woolly aphis (Apple blight it was called at that time) made its appearance, principally in the roots, in big clusters. In a few years the trees died.

Then the Northern Spy stock came to our rescue. I can assure you it was a great blessing, and has been so ever since. The aphis is quite difficult to get rid of in the branches, but a thousand times more difficult on the roots. If it were possible to get blight-proof seedling stocks all would be well.

At Coonawarra (South Australia), in some orchards the Apricots are grafted on wild Plum suckers, and now these suckers spring up in thousands. Again, near Mt. Gambier, several Cherry orchards are grafted on Cherry suckers, and the original Cherry trees are dead—all the work of dishonest nurserymen.

If Mr. Pfrunder got his fruit trees from honest nurserymen, his would be a different tale. I sell a large number of fruit trees every year, and have had them from Messrs. John Brunning & Sons, Somerville, Victoria, for about 20 years, and in that time I have never had a complaint. There are other honest nurserymen, and I would advise Mr. Pfrunder to give them a trial order.—A.K., Mt. Gambier, South Australia.

CODLIN MOTH CONTROL.

Dusting Proves Satisfactory in Queensland.

Dusting and spraying tests carried out in the Stanthorpe district, Queensland, where the ravages of codlin moth have been extensive, give encouraging results from dusting.

The results, however, are not conclusive, as they cover only one season. It is intended to repeat the experiment for three years in succession.

"IF."

A farmer in Ireland sued a railway company for damages when his cow was killed by a train. The evidence was conflicting, and the jury brought in the following verdict.

"If the train had run as it should have run; if the bell had rung as it should have rung; if the whistle had blowed as it should have blew, both of which it did neither—the cow would not have been injured when she was killed."

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd. Harcourt Fruit Supply Co. Ltd. Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.

New South Wales: N.S.W. Central Citrus Assn. Ltd. Batlow Packing House Co-op. Soc. Ltd.

Dried Fruits Industry

Items of Interest

Mr. Gunn's Statement.

Speaking at a meeting of growers in the Murray Valley recently, Mr. J. Gunn, a member of the Development and Migration Commission, told his hearers that the increased world production of dried fruits was responsible for the present state of the industry. The markets of the world were being over supplied. America, this year produced between 300,000 and 400,000 tons, and Greece was producing such large quantities of Currants that portion of the crop had to be retained within the country of origin in order that foreign markets might not be flooded.

Australia had to look to Great Britain as the market for the great bulk of her exportable surplus. The Canadian trade would develop, but Canada's consumption was limited, and she was close to American supplies. The New Zealand market was still more limited. Other markets might be worth examining, but the only markets that were any good to Australia were the profitable ones. Germany had concluded reciprocal treaties with Turkey and America; Australian fruit paid double duties in that country, and they hadn't reached the stage when they could afford to dump their fruit.

Great Britain was the greatest buyer of dried fruits and the best market in the world, and it was gratifying to observe that as a result of preference and the activities of the Export Control Board and the Empire Marketing Board the Australian fruit had captured an increasing share of that market. Last year this country sent nearly 30,000 tons of Sultanas to England. Great Britain's consumption was 60,000 tons, and they had supplied one-third of this, or 20,000 tons. To stabilise the industry, it was necessary to get 50 per cent. of the British consumption, and strenuous efforts were being made to effect this.

They had to supplant Turkish and American fruit. America sold up to 20,000 tons in Britain, and sold it cheaper than Turkish or Australian fruit, which commanded the higher class trade. They hoped to be able to further supplant the Turkish fruit, but they couldn't compete with the American prices.

The difficulties they were experiencing were not peculiar to Australia. In California, despite the wonderful Sun Maid organisation, the independent packers had almost taken control, and all the available evidence to-day showed that the dried fruits industry in California was in a worse position than in any other country. Any man controlling the Australian industry as a proprietary concern would map out his areas of business, put sheds where they were most convenient and not one more than was required; he would have his central sheds thoroughly equipped, provide dehydrators as an insurance against bad weather, and fumigators for the grub pest. For even grades and for economy and efficiency of inspection, 88 sheds were impossible. Such a man as he had in mind would take the shortest cut to the consumer, and would eliminate all unnecessary links.

Ninety-five per cent. of the Australian dried fruit pack was put up on the Murray River, and it was here, the Commission felt, was the opportunity of doing something effective along the lines of their recommendations. The business was worth about £3,000,000 a year, and supported about 40,000 people.

Fruit and Ornamental Trees

Grown for Sale by

C. A. Nobelius & Sons Pty. Ltd.

Gembrook Nurseries,
EMERALD, VICTORIA

Telephone: Box Hill 154 Catalogue on Application

Inspection Invited

Victorian Conference at Nyah

Important Motions Carried.

There was a big gathering of representatives at the State Conference of the Australian Dried Fruits Association, held at Nyah-West on Tuesday, September 18, and many important motions were carried, including one urging the Commonwealth Government to immediately take measures to prevent Californian Sultanas and Raisins from coming into Australia, on the grounds that the industry in California was in a state of disorganisation, and a serious menace to organised industry in Australia.

In moving the motion, Mr. Winterbottom said Californian prices had been falling for several months, and the A.D.F.A. had been watching the Customs Department for information regarding importations. They had also arranged with a firm in San Francisco to send advices of the quantities despatched.

The Association's board of management in July, acquainted the Development and Migration Commission of the position, and had since tried every means in its power to have the matter officially dealt with.

"Don't Eat Dates."

After considerable discussion regarding the Tariff Board's refusal to increase the duty on Dates, Mr. Danger moved "That a campaign to deter people from eating Dates owing to the filthy conditions under which they were produced, be referred to the Federal Council." (Carried.)

Trade With N.Z.

A motion moved by Mr. Palmer was carried: "That it be a recommendation to the Federal Council to consider sending two returned soldier dried fruit growers to New Zealand with the object of interesting the New Zealand Returned Soldiers' Association on the question and reciprocity of trade."

Grub Trouble.

Mr. L. J. Cleary said that a system should be introduced whereby growers should have all their sweat-boxes cleaned at the shed at a small charge before the new season began, as unsteamed sweat-boxes induced grub infestation of fruit.

Mr. A. Cockroft (Woorinen) said that some years ago regulations were made to compel all sheds to send away old season's fruit before the end of January. This regulation should be strictly enforced.

On the motion of Mr. G. H. Badger (Red Cliffs), seconded by Mr. Cockroft, it was decided to request the Customs Department to enforce the

regulations preventing old season's fruit remaining in the sheds after January 31.

On the motion of Mr. A. R. Lawrence (Nyah), seconded by Mr. A. McKinnon (Red Cliffs) it was decided to ask the packers to consider the advisableness of taking over growers' sweat-boxes at a valuation or, alternatively, that packers consider Mr. Cleary's suggestion to sterilise growers' sweat-boxes at a small charge.

Frost Insurance.

Mr. P. Malloch read the summary of the discussions at a meeting of the Board of Management regarding frost insurance, which, the report stated, the Board considered impracticable owing to the various difficulties. The history of the industry also showed that more damage was done to the vines by rain and hail than by frost.

The Conference agreed to send Mr. Malloch's report to the Federal Council.

It was agreed to make representations to the Victorian Dried Fruits Board that the hours of delivery to the sheds be from 7.30 a.m. to 5.45 p.m., that loads in the queue at 5.40 p.m. be unloaded.

The question of the distribution of fruit in Australia was referred to the Federal Council.

It was decided to ask the London agency of the Export Control Board to take steps to increase the demand for Australian dried fruits in the North of England and Scotland.

Publicity Committee.

On the motion of Mr. Badger, seconded by Mr. Lawrence, it was decided to appoint a Victoria Grade and Publicity Committee, consisting of Messrs. L. J. Cleary, D. C. Winterbottom, P. Malloch and T. F. McKay.

"We'll be Using More Next Year"—

A common remark wherever Farmers, Orchardists, or Market Gardeners discuss Sulphate of Ammonia. To some it is almost a "new fertiliser." To others it is quite old, Market Gardeners particularly having used it consistently for over forty years. *They* know its value.

Orchardists, Vinegrowers, and Farmers generally, have only comparatively recently experienced the happy effect of using Sulphate of Ammonia on their crops. They have learned from experience over the last six years at least that there's money in its use.

SULPHATE OF AMMONIA is nitrogen in its best form. Nitrogen is a vital element of plant food, improving not only plant growth, but yields and quality as well.

Ask about "neutral" Sulphate—easy to apply, free of lumps, and will not cake.

✣ ✣ ✣

THE METROPOLITAN GAS COMPANY,
196 Flinders Street, Melbourne.

SA 8/28

SOME DELIGHTFUL WAYS OF USING RAISINS.

Equal amounts of chopped Raisins and nuts moistened with Orange or Lemon juice make a delicious and nutritious sandwich filling.

Chopped Raisins and cream cheese make a delightful sandwich filling.

Mix Raisins in pieces with the pie filling. They add flavour, and will take the place of a portion of the sugar.

Bananas are delicious baked in a sauce made of chopped Raisins and water. They should be basted every few minutes.

Gingerbread which contains plenty of Raisins may be served hot with Lemon sauce for dessert.

An easy and nutritious marmalade may be made by cooking equal parts of chopped Raisins, Apples and water until thick, and adding a little Lemon juice.

Chopped Raisins and Horseradish make a splendid relish to serve with meat.

Add a few Raisins to the poultry stuffing, and you will never again omit them.

Chopped Raisins added to scalloped Apples give an unusually distinctive flavour.

Laborious Cherry Facing

reduced to a minimum by the use of the

"Pacemaker" Mask

Facing four cases easier than facing one, and the whole "get up" of the fruit much more attractive. The patentees designed the "mask" for their own use, but cherry growers have been so keen about it that it is being distributed Commercially.

Excellent for gooseberries and other small fruits.

Virginia Hygienic Orchard Coy.

P.O. Box 5. Young, N.S.W

New Method of Sulphuring Fruit

Raisins, Apricots, Peaches and all Fruits

High Quality Fruit with a Minimum of Sulphur

H.P., Tongala, writes:—"The enclosed clipping from a Californian paper, shows much higher prices for Sulphur-bleached Sultanas, than for the ordinary run. What is the proces of sulphuring?

Answer.—The latest methods for sulphuring all sorts of dried fruits, are given in the article published hereunder. "The Pacific Rural Press," writing in reply to our question in reference to sulphur bleached Thompsons (Sultanas), states that the fruit is soda dipped, and then sulphured, the same as Apricots, and thus have a light water yellow coloring, making them almost as transparent as the finest grade dried Pears.

Perhaps the most exact parallel in production of this kind of Raisin, is in drying choice sulphured Pears.

"The higher price of Thompson's seedless, which is, of course, nothing but the true Sultanina, is due to the fact that so few of them are produced, and that labor is very much greater than simply field drying of naturals. The prohibitions against sulphur in Europe, have reduced the market for these, and America prefers the brown naturals, so we are actually underproducing sulphur-bleached Raisins a bit now."

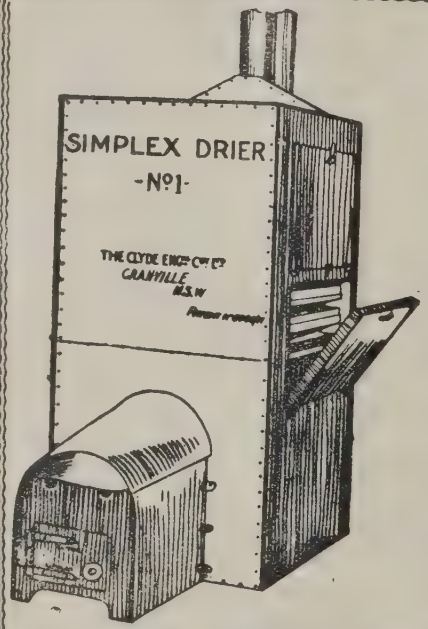
FRUIT SULPHURING METHODS.

(By P. F. Nichols, Fruit Products Laboratory, University of California, Berkeley.)

THE present restrictions upon the content of sulphur dioxide in dried fruits now in force in France, Austria and the British Isles result in difficulty in marketing our fruit abroad. As a result, efforts are being made to accomplish satisfactory drying without the use of so much sulphur as is commonly employed. R. S. Hiltner, of the Dried Fruits Association of California, has developed a method commonly called the "dense smoke" method for use in drying Apricots and Peaches and reports that in practically all instances this method results in a product of entirely satisfactory quality and at the same time with distinctly lower sulphur content than that following the use of longer sulphuring periods. The method is as follows:—

Sulphur House.—The house may be built of any material, preferably wood, but not concrete or brick. It is preferable to have two cars in a house, but never three or more in a tunnel. The house should be long enough so that there is at least 15 inches between the back of the door and the front of the front try. The house should be so constructed as to be practically free from leaks. At the bottom of the door a vent should be provided sufficient to promote rapid and complete burning of the sulphur. Ordinarily two holes one inch in diameter near the bottom of the door will be sufficient. No other vents should be provided.

Burner.—The preferred type is a cylindrical pot of concrete 10 to 12 inches in diameter and 12 inches deep. It should be painted or smeared on the outside with asphalt or tar, and should be set in a hole in the ground the bottom of which is smeared or infiltrated with oil to prevent absorption of ground moisture. The bottom should be paved with heat resistant material, such as brick, glazed tile, cement (if dry) or magnesia. The



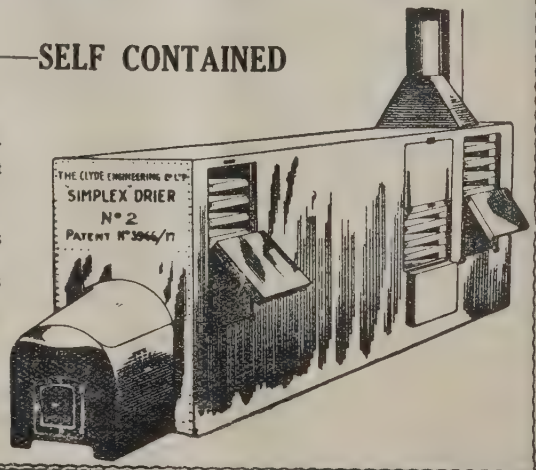
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ltd.
GRANVILLE, N.S.W.

Subsoiling for Better Crops

Every Grower knows the value of Subsoiling. By its use the production of Arid Lands and worn-out Plantations is increased

Subsoiling at the Research Farm, Werribee, Victoria

Perfect Regulation of Depth Obtained

Filled with steel beam, strong and high, with adjustable handles.

The heel is adjustable to give the desired suction.

An excellent medium for loosening the subsoil.

It can be used with three or four horses, and a guage shoe controls the depth.

SHOW VISITORS

Our Stand at the Royal Show is

13 PLUMMER AVENUE

We will be pleased to see you

The "HARVEY-DELANY" GRADER

PERFECT GRADING - NO BRUISING

GRADES INTO EIGHT SIZES

Progressive Orchardists will find that it pays to instal the "Harvey-Delany" Grader, because it is built on lines for efficiency and long service, and is just the machine for the grower who wishes to cut down labour costs.

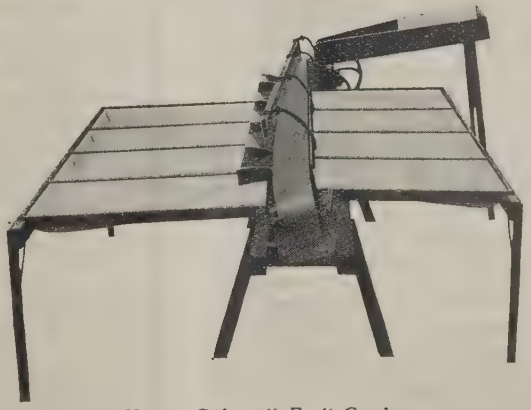
The Labour Saving alone will more than Pay for it the First Season

There is nothing to get out of order, and is so simple that a child can operate it.

The Machine with the ONE moving element.

This Grader is built for EFFICIENCY and DURABILITY at a PRICE to suit every grower

WRITE FOR PARTICULARS



"Harvey-Delany" Fruit Grader

To . . .

D. HARVEY,

ORCHARD IMPLEMENT MANUFACTURER
BOX HILL, E.11, VICTORIA, AUSTRALIA

Show Rooms: 440 ELIZABETH ST., MELBOURNE

Agents all States

top of the cylinder should be flush with the top of the ground or floor. The pot should be placed just back of the sill of the door and in such a way that the trays do not overhang the pot.

Trays.—Any type of tray may be used. In stacking they should be staggered, especially if the ends are not open. They may be stacked to any convenient height.

Sulphuring.—Burn sufficient sulphur to maintain a dense smoke throughout the entire sulphuring period. Any brand of dry well sublimed sulphur is suitable for the purpose. (In order to burn crude or rock sulphur a special burner will be required.) It is important to have a quick and free-burning sulphur with the draft so regulated as to stimulate rapid burning. If the sulphur house is tight and wind conditions are average, 5 to 8 pounds of sulphur per ton of fresh cut fruit will be sufficient. Use no more sulphur than will burn completely during the sulphuring period.

Time.—For well matured Apricots, 2 to 2½ hours is sufficient. For Peaches expose 3 to 3½ hours.

Caution.—Never remove the fruit from the sulphur house without there being a dense smoke in the house when the door is opened. Well sulphured fruit appears moist on the cut and skin sides and the pink or red colour should be completely gone. The complete penetration of the cooked appearance through the flesh as shown by cutting always indicates that the sulphur has been unnecessarily heavy and the dried product will contain an excessive amount of sulphur.

This method is now under study by the Fruit Products Laboratory of the University of California and by the Fruit and Vegetable Chemistry Laboratory of the United States Department of Agriculture. In due time a report will be made by these agencies as to the effectiveness and desirability of the method. In the meantime it would appear well for growers interested in keeping the sulphur content of their fruit to a safe minimum to consider the possibility of using this method and particularly in the construction of new sulphur houses.

"Yes, my friends," said the street preacher, "The time will come when the Wheat will be separated from the chaff. Who will be the lambs, and who will be the goats?"

A tired voice at the rear of the crowd murmured. "I'll be the goat, go on and tell us the joke."

What is Happening in California?

Resignation of Sun Maid's Manager Not Accepted.

Over-production and Efforts Towards Stabilisation.

While the raisin situation in California has serious aspects because of over-production, it would appear that the industry is working out plans for stabilisation.

Recent estimates place the carry-over at 110,000 tons (of which 100,000 tons are in the hands of the Sun Maid organisation): while the 1928 harvest was at first estimated at 300,000 tons, later reports indicate that the crop will be much less, because of insect pests and fungus diseases, also excessive heat. Cuts in prices were made by Sun Maid and independent packers, but sales are slow.

At a conference attended by 3,000 growers, it was decided to refrain from picking half the crops, in order to get rid of the surplus.

The reports published in Australia regarding the resignation of Sun Maid's general manager (Mr. Ralph Merritt), the closing of the Sun Maid offices, and the taking over of the properties by the banks appear to be overstated.

The "New York Packer" of August 25th reports that Mr. Merritt tendered his resignation, but the directors would not accept it, giving Mr. Merritt extended leave of absence. Sun Maid's position is stated to be quite sound.

Mr. H. M. Creech has been elected Vice-President of the Delaware (or manufacturing corporation) of Sun Maid. The statement that the banker group had set up a form of receivership is denied. Mr. Creech says the interests of Raisin-growers and bankers are identical: the bankers are assisting on a basis of "enlightened self-interest."

The Peach and Fig Growers' Association have made an agreement with Sun Maid for receiving manufacturing and selling dried Peaches and Figs, in addition to Raisins; this looks like an improvement in the situation.

As regards the fresh fruit situation, which is vitally affected by the Raisin market, Mr. Donald Conn, manager of the California Vineyardists' Association, anticipates that growers will have a satisfactory season.

Raisin Date Sandwiches.—Two cups Raisins, one cup Dates, Lemon juice, slices of buttered bread. Mix the finely chopped Raisins and Dates. Moisten with the Lemon juice, and spread between the slices of bread.

Lemon Honey.—Six tablespoons butter, one cup sugar, three egg yokes, one large Lemon; cream butter; add sugar gradually; then heat in double boiler until butter is melted. Add yolks of eggs, beaten until thick, and Lemon coloured, and grated rind of Lemon. Stir until it begins to thicken; add the juice of Lemon, and continue stirring until the consistency of honey. Turn into two sterilised jelly glasses, and cover.

"OBLIGING."

Jim Higgins was having his first experience as a "hired man" on the farm. His employer was more than disposed to be thrifty. On the first morning he breakfasted with the family on cold bacon. He proceeded to cut off the rind and placed it on the side of his plate.

The farmer noticed this, and looking up remarked: "We eat the rind here."

"That's all right," replied Jim. "I'm jest getting mine ready for you."

MARGETSON
& CO. LTD.

Fruit Importers & Salesmen

30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL
Head Office—Covent Garden Market, London, W.C.
Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.

Shipping Nos.
431 and 432

Fighting Insect Pests in the Orchard

San Jose, Apple Mussel, Red, Olive and Other Scale Insects.

The young of scale insects are now hatching. When these are noticed, it is advisable to spray at once with nicotine sulphate or black-leaf 40. Use lime sulphur **in summer.**

Apple Root Borer.

Keep a sharp look-out for these most destructive insects. Spray with arsenate of lead, and place zinc bands around tree. Keep orchard free from weeds.

Black Aphids of Orange and Lemon.

See "The Fruit World," September 1st, 1928, p. 327.

Green and Black Peach Aphids.

These troublesome insects are particularly bad this season. They first appear when the buds are beginning to swell. These aphids breed very rapidly, so there are a number of broods before mid-summer, at which time the survivors go underground and fasten on to the roots. When aphids are noticed, spray with nicotine sulphate or black-leaf 40. A little soapy water should be added to the mixture.

The Pinara or Snout Moth of Apple.

The caterpillars of this moth are now making their appearance. They are native insects, and are most destructive pests of Apple trees, especially in the destruction of the fruit spurs.

The moth is a yellowish drab colour, the female measuring about 1½ inches across the outstretched wings. The male is smaller. The insects possess a snout-like appearance on the frontal part of the head. Caterpillars grey, resembling the bark of Apple trees.

Spray with arsenate of lead.

Pear-leaf Blister Mite (Phytoptus).

Keep a sharp look-out for these mites, which usually appear about this time of year. When affected, the leaves produce reddish or dark-brown spots, which become darker with age, and may spread so as to entirely cover and destroy the foliage. The mites pass the winter on the trees under the bud scales, and begin to work upon the leaves as they appear in the spring. The eggs are deposited in holes bored into the underside of the leaves. The work of the young after hatching cause the galls or swellings. They attack the Pear and Apple.

Spray at once with lime sulphur. Benzole or kerosene emulsion is also recommended.

Woolly Aphis.

Woolly aphis is becoming rather plentiful in some orchards at the present time. Spray with nicotine sulphate and red oil. To prepare sufficient mixture to treat 100 trees, 1 lb. soap should be boiled in a gallon of water till dissolved; add one gallon of red oil, and mix thoroughly; then add one pint of nicotine sulphate, and, after mixing the whole for a few minutes, add 80 gallons of water. If the water is hard, a small piece of washing soda should be added.

Woolly Aphis Parasite (Aphelinus mali).

Put out Aphelinus parasites. These are obtainable from the Department of Agriculture, Melbourne.

Light-brown Apple Moth.

The greenish, active caterpillars of these destructive moths are found practically all the year round. It is particularly destructive to Apples, Pears, etc., and in recent years to Oranges. The caterpillars are particularly destructive to fruit spurs of Apple and other fruit trees.

Spray with arsenate of lead, one in 25.

Codlin Moth.

See the "Fruit World," July 1st, 1928, p. 237.

Pear and Cherry Slug.

These insects are now appearing in orchards. The larva (blackish-green, slimy objects), eat the epidermis from the leaves; these soon shrivel up and drop. The perfect insect is black, shining and about half the size of the ordinary house fly. To kill "slugs," spray with arsenate of lead, dust trees with lime, soot or dry sand. Hellebore when fruit is beginning to ripen.

THE THRIP SCOURGE.

Thrips tabaci.

One of the Worst Pests of Apples, Etc.

(By C. French, Jun., Victorian Government Entomologist.)

Description.—The adult female is pale yellow in colour, with an elongated dusky spot on the dorsal surface of the middle thoracic segment. The length of the body varies from 1-25th to 1-20th inch. The eyes are brown, while the antennae and legs are dusky. The wings are yellowish and fringed. The antennae are seven-jointed. The male larvae are somewhat smaller than the female, and of a darker colour, and often with a greenish tint. The eyes are red.

Life History.—The insects hibernate in the adult stage only. They begin to emerge about September or October, according to climatic conditions, and immediately commence egg-laying. The eggs are inserted in the leaves or tender stems. The young begin feeding soon after hatching. When ready to pupate, the larvae seek shelter under rubbish or in the ground, where the nymphal stage is completed and the adults emerge. There is an overlapping of broods, so that during the summer months all stages may be found. A complete life-cycle from egg to adult occupies about two months.

Nature of Work.—The constant chafing of the thrips upon the leaves, flowers, etc., produces countless numbers of small white or brown spots, which are very noticeable. The growth of plants are often stunted by the attacks. The mouth parts are modified, so that the insects pierce or chafe rather than bite. Some species work principally upon the young buds and flowers.

Control.—Trips are very difficult to control, because of their large numbers.

Tobacco decoctions and lime-sulphur or oil emulsions give very good results. The following formula is re-

commended:—

Commercial lime-sulphur, 5½ gallons.

Black-leaf 40, 14 fluid ounces.

Water, 200 gallons.

The addition of one part of black-leaf 40 to two thousand parts of an oil emulsion or a miscible oil will also give good results.

Nicotine sulphate is also recommended.

An American spray which has given good results is made as follows:—

Two tablespoonfuls Paris green.

Two lbs. brown sugar.

Three gallons water.

A solution of ½ oz. benzole to two gallons of water with 2 oz. soft soap can be used, and is found effective for killing thrips without burning even the most delicate flowers.

Spray thoroughly, use fine nozzles, which produce a fine spray, and hold them as near the plants as possible.

CITRICOLA SCALE.

A pest of recent introduction in the citrus groves of California is the Citricola scale. At first the growers thought it was merely a type of soft brown scale, but later found that it was quite a new type of pest.

The insect prefers warm localities, and the injury caused by it is due to the insect's method of feeding, and also to the sooty mold fungus growth that lives on the honey dew, or excrement given off by this scale. The smutting is particularly noticeable during the spring and summer, as the scale matures. As with other insect pests, the Citricola derives nourishment from the juices of the plant (sap).

The new scale resembles the common soft brown scale, but has a decidedly mottled grey colour when it becomes fully matured. It is larger than brown scale, and the young are flatter and more transparent than those of the soft brown scale.

Citricola is controlled by fumigation and sprays commonly used against other citrus pests.

AGENTS WANTED

To Influence Consignments of Apples by Reliable Firm

Write, Stating Terms, Etc., to—

HARTSTOKE, FRUITERERS LTD.,

Brentford Market, Middlesex.

Code: A.B.C., Fifth Edition.
Cables: "Hartstoke, Brentford, Middlesex."

Spray Residue Removal

Latest Information from U.S.A.

VERY careful study is being given in the United States, to the subject of spray residue removal from Apples and Pears.

An interesting report is just to hand, the U.S.A. Department of Agriculture (Bureau of Plant Industry), dealing with: (1) Methods of cleaning Apples and Pears; and (2) the relation of cleaning treatments to fruit injuries and storage diseases. Under the first section, the report is signed by Mr. H. C. Diehl, Associate Plant Physiologist, Wenatchee (Wash.), Mr. W. T. Pentzer (Junior Marketing Specialist), and L. A. Fletcher (Junior Physiologist).

The second part was compiled by Messrs. D. F. Fisher (Plant Pathologist), and E. L. Reeves (Junior Pathologist).

Much interesting information is contained in the 34 pages comprising the report. A summary is as follows:—

ORCHARD PLOUGH

The **COCKSHUTT ORCHARD TWIN GANG MOULDBOARD PLOUGH** is specially designed for Orchards and Vineyards. It is carefully built with well-braced steel frame, dust-proof wheels, and best soft-centre steel mouldboards. It can be adjusted in a few minutes, so that it will plough closely to the trees or vines without harming them in any way. The lever can also be tilted to let the plough pass beneath low branches.

The Ideal Plough For Orchardists

Full particulars gladly sent on request. Write to-day.

Also Agents for
"Vega" Separators; "Hercules" Drag Saws; "Eureka" Potato Planters; "New Era" Rope Makers, etc.

Buckeye Harvester CO.

Whiteman Street, Sth. Melbourne

Numerous experiments with Apples and Pears, handled in a commercial way, have been conducted at the Wenatchee Laboratory of the United States Department of Agriculture, to determine the relation of cleaning treatments to fruit injuries and storage diseases.

The washing of Pears with dilute hydrochloric acid can be successfully done in a commercial way. Pears are more susceptible to injury from the alkaline washes and dry-cleaning treatments.

An injury commonly found at the calyx of washed Apples, and generally attributed to hydrochloric acid burning, has been definitely proved to be caused by soluble arsenic derived from the spray residue.

Parts of the Apple injured by soluble arsenic offer a favourable place for the entrance of rot organisms.

Arsenical injury at the calyx may occur on heavily sprayed Apples in the orchard following rainy weather; it may be caused by the accumulation of soluble arsenic in the washing solution; it may be caused by the incomplete removal of spray residue from the calyx region and its conversion into soluble form under the influence of moisture or solvents retained on the fruit or condensed thereon.

Arsenical injury can generally be avoided, in washing Apples, by (1) thorough removal of all spray residue from the calyx region; (2) frequent change of washing solutions, and provision for thorough rinsing with fresh water; and (3) use of a lime-water rinse to reconvert any adhering soluble arsenic to insoluble form. It cannot be prevented by using baking soda in the rinse water.

Hydrochloric acid burning on the surface of the Apple has been encountered only on unrinsed fruit, or that which remained in the acid bath for a much longer period than in commercial practice.

Chemical burning from hydrochloric acid and dissolved arsenic sometimes occurred in the core cavity of Apples having open calyx tubes. Such injury was especially prevalent on Apples subjected to submersion methods of washing.

The extra handling involved in cleaning operations produces injuries which result in much of the increased loss due to storage rots.

After washing, Apples should be dried as thoroughly and as quickly as possible, in order to reduce danger of arsenical injury and resulting bluemould rot. It is better to pack Apples while they are still wet from washing than to allow them to stand until the moisture is lost by evaporation.

THE "LIGHTNING" FRUIT GRADER COMPANY.

Of particular interest to the orchardist, is the "Lightning" Fruit Grader Company, which for some years has been specialising in the manufacture of machinery for handling fruit, both on the orchard and in the packing house, and which has proved of great benefit to the fruit-growing community.

Had the inventors of the "Lightning" graders been other than practical orchardists, it is possible that the disability of injuring the fruit would not have been overcome. It is becoming more and more apparent every season that the greatest care in handling fruit is a vital necessity. Constant application to the production of a suitable machine resulted in the adoption of a soft rubber roller, and a soft rubber conveying belt, thereby achieving the desired result of accurately sizing the fruit by diameter, without damaging it in any way.

It was not difficult to construct a machine that would size the fruit with reasonable accuracy. This, however, was not sufficient for a sizer that would be adopted by fruitgrowers. The pioneers of the "Lightning" fruit grader had for some time a machine constructed, which gave fairly good results as far as sizing was concerned, but, as it lacked the essential principle of two moving elements to ensure protection from injury to the fruit, it was of little or no value. This machine is interesting merely as the forerunner of the present-day "Lightning" grader. When the principle of two moving elements was determined upon with the adoption of the stepped rubber roller, the "Lightning" grader became a commercial proposition, a commercial success, and the nucleus of what is now a flourishing business.

The rapid growth of this enterprise has been due to the quality of construction of the machines, the enterprise of the proprietors, and the thorough understanding of the requirements of the fruit industry.

Machinery for handling the fruit pack, in addition to being mechanically correct, must embody features which eliminate doubt in regard to injury to the fruit. The experience of many seasons in all classes and varieties of fruit assures the "Lightning" Fruit Grader Co. a continued demand for their products, no matter how stringent the regulations for handling and packing fruit might be in the near future. The factory and offices are at 5 Hoddle-street, Collingwood, Melbourne.

SULCAR
CARBONISED SULPHUR
Spraying Mixture.
THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED
DOES NOT BURN.
Manufactured by
SINCLARE & Co.
BOX 3, KING ST., P.O.-SYDNEY.
(Works.-Alexandria)

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of G. WOOLF & SONS.
Bankers.—National Bank of Australasia (Western Branch), Melbourne.
City Telephone: M 2012. Private Phone: M 3055.
City Address: Box 4003, G.P.O., Spencer St., Melb.

FRUIT TREE TRADE REPORTS.

Messrs. C. A. Nobelius & Sons Pty. Ltd., nurserymen, Emerald, Vic., report as follows under date September 14th:—

Trade during the past season has been only fair—a record could hardly be expected owing principally to the bumper Apple crop and the position of the canneries.

In the various classes, the demand was as follows:—Almonds sold only fair. In Apples, there was good demand for Granny Smith, Rome Beauty, Munroe's and Cleopatra. Apricots were sold right out, varieties mostly in demand being Tilton and Moorpark. Only light plantings of Cherries were made. Nectarines sold well, and were unprocurable at the end of the season. In Peaches, there was little demand for clingstones, with the exception of Pullars, Healesville, and Thiele's, these varieties selling well, and also the freestone varieties; in Golden Queen, Phillip's, Levis, and Sims large quantities will be carried over for next season, or destroyed, the latter being the wisest plan. In Pears, the demand was very limited, and large quantities are still available. Plums were in better demand.

In Ornamentals.—Oriental Planes, Elms, and Poplars were in demand, the last-named showing a marked improvement, the variety Lombardy, which is the upright dilitata, being in good demand.

Hurstville, N.S.W.

Messrs. F. Ferguson & Son, fruit tree nurserymen, report under date September 13th:—

Trade held up well, and much more than fulfilled February-March expectations.

Does This Interest You!

WELL-KNOWN English firm of Fruit Brokers and Importers require **Sound, Reliable and Energetic Representatives**, either firms or individuals, to induce **Consignments of Apples, Pears, etc.**, on their behalf, from **New South Wales, Victoria, South Australia, and Western Australia.**

Terms by Arrangement.

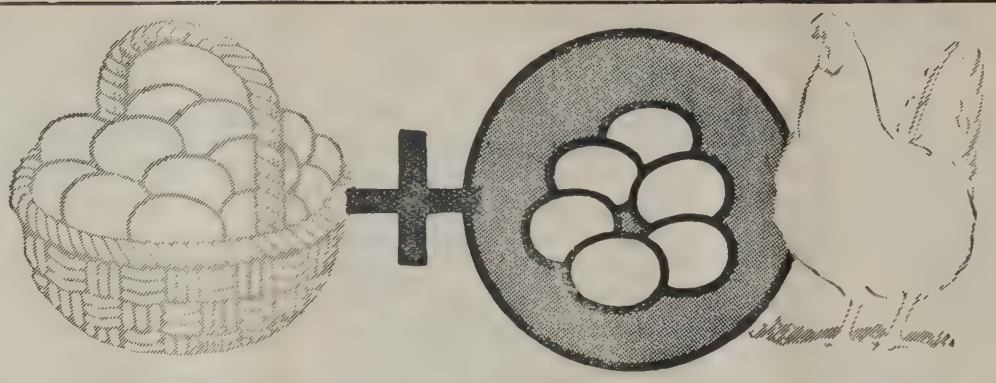
References Required and Exchanged.

Apply in first instance to

S.B. c/o Lockwood Press
1 Mitre Court,
Fleet Street, London, E.C.,
England.

The demand was uniformly pretty keen, Apples, Apricots, early Peaches, Plums, Quinces and citrus, especially so; canning Peaches and Pears being possibly in least demand, or, rather, not up to "before lifting" expectations.

Our greatest enquiry was for export varieties in Apples, Granny Smith, Tasma, Delicious, Trevatt, Tilton and Moorpark Apricots, and the usual popular varieties of Oranges, also Marsh Seedless Grape Fruit and Lemons.



50 per cent more Eggs

and the fowls are much healthier

That is the result obtained by a poultry owner in New Zealand

WE quote the New Zealand testimonial given below, chiefly because it affords additional proof that Karswood Poultry Spice (which contains dried and ground insects) is successful in any country. In our own Commonwealth, be it the Northernmost point of tropical Queensland or the chilliest and most southern part of Tasmania, "Karswood" is proving its superiority. Its supporters are legion in England, the Continent, South Africa, America, Australia and New Zealand. Such universality abundantly proves one thing, viz., that in addition to being an egg-producer, "Karswood" is above all a natural tonic. Everywhere the results are the same. Everywhere, too, poultry owners enthusiastically admit that while helping fowls to excel themselves in egg-laying, "Karswood" does not force or injure fowls in any way. Don't doubt any longer. Increase your egg supply by 50 per cent. by commencing with "Karswood" straight away. One 1/– packet is sufficient for twenty birds for sixteen days.

30 to 35 eggs a week from six Birds

66 *Eldent St., South Shields.*

Having started to keep poultry I was advised to try your Karswood Foods. I got Karswood Poultry Spice, and the results are more than I expected. I am getting 50 per cent. more eggs, and the fowls are much healthier, and eat their Karswood with much more relish than ordinary food. I am getting from 30 to 35 eggs per week from six hens at the present, and some of them are moulting at that. I may add I have recommended same to my friends, who have got as good results as myself.

(*Signed*) *J. CAMPBELL.*

Make this Test

Go to your local grocer, storekeeper or produce dealer. Get a 1/– packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds in accordance with the directions on the packet. Do not expect immediate results; Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Supplies

Karswood Poultry Spice is obtainable at all wholesalers and retailers at the following standard retail prices :—½lb. packet, Price 1/–; 1lb. packet, Price 2/–; 7lb. tin, Price 13/–; 14lb. tin, Price 25/–; 28lb. tin, Price 48/–.

14 FP.28

POULTRY NOTES.

Action Against Vermin.

NOW that the warm weather is approaching, vermin are apt to multiply in abundance. Even if one is certain that there is no vermin in the poultry house, it is always wise to adopt precautionary measures, and perches should be given a frequent application with a strong disinfectant. The nesting material should be renewed as often as possible, and dust baths provided. Birds cannot produce well if infected with lice.

Cure for Poultry Lice.

A new use has been found for Black Leaf 40. Experiments carried out in California with Black Leaf 40 as a lice killer on poultry has proved its efficiency in this direction.

The liquid was placed on the perches in a fowl-house where the birds were badly infected with lice. After three days, every fowl was examined, and no trace of lice was seen.

Chicks Need Greens.

Be sure to provide tender green feed for the chicks. Lettuce, Cabbage, Potatoes, of clippings ground up fine, and fed once a day, or at least three or four times a week, will increase the growth and vitality of your chicks and help avoid leg weakness. Chicks that are correctly started means that they are half raised.

Brooder Litter.

Proper litter for the brooder is very essential. Use coarse sand around near the stove and for two or three feet away from the edge of the hover. Clipped clover, lucerne, or finely cut straw or good fresh earth can be used over the rest of the brooder house floor.

Feeding Chicks.

Although formerly most people fed their chicks too soon after hatching, now many are erring on the other side—waiting too long for the first feed.

About 24 hours are usually required to complete a hatch. That is, it will be 24 hours from the time the first chick hatches until the last one is out of the shell. Hence, some of the older chicks are 60 to 72 hours old before they are allowed to eat.

Forty-eight hours after the hatching is completed is recommended as the final time for first placing food before the chicks for best results.

Paralysis in Chickens.

There is nothing to be done in the case of paralysis, but it is best to isolate or destroy all paralysed birds.

Small Start Best.

Some people are advocating that poultry-keeping should be recommended as a sole means of livelihood and not as a side-line. This contention would be quite all right if the question of managing a large flock were an easy one. The knowledge of how to make poultry pay on a large scale is certainly available, but it is essential that such knowledge should first be tested in practice.

Obviously, it would not be advisable for the average person to start out on a large scale. It is far better to gain experience in a small way as a side-line, and to extend operations with the knowledge gained. That is the safe course.

Infertile Eggs.

Many poultry-keepers, particularly those who are working an incubator for the first time, fail to realise that eggs purchased for hatching purposes, and which go rotten during the incubation process, must have been fertilised, or they would not have gone bad. If an egg is unfertilised it will remain perfectly clear throughout the whole hatching period. This is because there is no germ from which life can start.

In despatching sittings of eggs, the best a breeder can do is to send only those which he has every reason to believe are fertile. Complaints relating to eggs failing to hatch are sometimes justified, but in many cases the blame is put on the wrong shoulders. Very often the person who makes the charge is more to blame for the failure than anybody else, through improper management of the incubator, or sitting hen, as the case may be.

B.W.D. Incurable.

Perhaps the two worst diseases which chickens are likely to contract are coccidiosis (sometimes known as blackhead) and bacilliary white diarrhœa. Both of these diseases are incurable, and when they appear amongst the broods the only remedy is to destroy them. Coccidiosis usually makes its appearance amongst chicks when a month old, and birds of any age beyond a month are susceptible.

BEEKEEPING.

Artificial Increase.

ARTIFICIAL INCREASE may be accomplished in many ways, but perhaps the most satisfactory is by means of nuclei and division. A nucleus is best formed of two frames of emerging brood and young bees, one frame of honey, and one containing pollen. This must be completed by a virgin queen or a ripe cell. The nuclei may be utilised throughout the season for the mating of queens for renewal, and at the end of the summer—if two or more are united, or if each one is reinforced by the addition of bees and brood from strong colonies—they may be wintered in safety and will form good stocks for the next season. No surplus can be expected from them the year of their installation.

In dividing, it is best to wait till the colony is preparing to swarm and ripe cells appear in the hive. The hive can then simply be split in two by putting half the bees and brood on another stand, taking care to leave queen cells in each division, and, for preference, putting as much emerging brood in the half which is to be placed in a new position. This latter precaution is necessary in order to make up the wastage from the field bees that will return to the old stand.

Each hive can be completed by filling the vacancies by drawn-out combs. The queen cells in the queenless half will be nursed by the young bees, while those on the half containing the queen will be torn down by the bees when they find the hive depleted.

If the apiarist wants to be sure of this being done, he may search for the queen and remove her while the division is being made, afterwards putting her in the hive on the new stand.

The division method is advocated on account of its simplicity, and the fact that there is no necessity for finding the queen before the operation. It is a most effectual prevention of swarming, and saves a deal of trouble where the increase is desired.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.

Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Davis, J., Western Market.
Dennys, Lascelles Ltd., Temple Court, Melbourne.
Millis, A., & Sons, Western Markets.
Lister, G. Western Market.
Mills, J. B., & Co., Bank House, Bank Place Melbourne.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
F. B. Bolton.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Piesse & Co., C.

Launceston.

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.

Dennis & Cooper Ltd., Covent Garden.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salters Hall Court, Spitalfields Market, E.1.

Hull.

White & Son Ltd.

Manchester.

The Port of Manchester, rep., W. J. Wade, 8 Bridge Street, Sydney.

GERMANY.

Bremen.

Fruchthandel, Gesellschaft.

Hamburg.

Astheimer, P. H., & Son, Fruchthof.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

AUSTRALASIAN MARKETS.

New South Wales.

Sydney (18/9/28).

Mr. F. Chilton, City Markets, Sydney, reports market prices as follows:—

Queensland Fruits.—Bananas, 12/- to 21/- per case; Papaws, 8/- to 16/-; Pines (Smoothleaf), 15/- to 20/-; Tomatoes (North Queensland), 8/- to 17/- per half case.

New South Wales Fruits.—Bananas, 12/- to 21/- per case; Lemons, 4/- to 7/- per bus. case; Navels, 8/- to 11/-; Mandarins, 4/- to 11/-; Oranges, 3/- to 6/-; Grapefruit, 6/- to 10/-; Apples (Granny Smith), 5/- to 13/-; Passions, 10/- to 20/- per ½ case; Loquats, 3/- to 10/-.

Victorian Fruits.—Pears, Jos., 8/- to 13/- per bus. case; P.T., 8/- to 12/-; W.C., 6/- to 10/-; Apples, Jons., 5/- to 9/-; R.B., 5/- to 9/-.

Tasmanian Fruits.—Apples, Jons., 5/- to 9/- per bus. case; F.C., 3/- to 6/-; N.Y.P., 4/- to 9/-; S.P.M., 4/- to 8/-; C.P.M., 4/- to 9/-; Dem., 6/- to 9/-; S.T.P., 3/- to 5/-.

The Sydney market is still heavily supplied with citrus fruits from local orchards, also with Tasmanian Apples, the quality of which in many instances is not in demand, causing considerable loss to shippers. Now that warm weather has set in, a better demand for dessert fruit is anticipated.

Victoria.

Melbourne (1/10/28).

The following are the wholesale prices ruling at the Western Market:—Apples, dessert, 4/- to 6/- per case; do., cooking, 3/- to 5/-; faulty lots cheaper. Lemons, Victoria, 5/- to 6/-; Mandarins, 5/- to 11/-; Victorian Common Oranges, 6/- to 8/-; New South Wales do., 4/- to 6/-; Navel Oranges, Murray districts, Victoria, good counts, 11/- to 13/-; large size, 7/- to 10/-; Murray district, South Australia, good counts, 13/- to 17/-; large size, 10/- to 12/-; others, 8/- to 10/-, and 5/- to 7/-; Pineapples, 13/- to 18/- per double case; Tomatoes, South Australian, 22/- to 29/- per half case; small, 12/- to 14/-.

Melbourne (21/9/28).

The V.C.C.A. market representative reports as follows:—

"The market has been dull generally during the week, owing to unsettled weather conditions, and the full supplies to hand. Prices for Navels have held, and at the end of the week there was a better tone as regards good counts of Navels. The market has been over-supplied with Mandarins, and only larger sized juicy fruit is in demand, puffy dry lines being difficult of sale at the lowest prices. The market has also been fully supplied with Lemons, and sales have been slow owing to heavy supplies and cold weather. Only the best packs of Grape Fruit are in demand.

"Victorian and border standard Navels:—45s, 5/- to 6/-; 60s, 6/- to 7/-; 75s, 7/- to 8/-; 84s, 8/- to 9/-; 96s, 8/- to 10/-; 112s up, 11/- to 13/-; specials higher. Common Oranges, 6/- to 10/-, a few higher. Mandarins, 4/- to 9/-; Lemons, 6/- to 8/-; Grape Fruit, 18/- to 24/-."

Western Australia.

Perth (20/9/28).

Apples, dumps: Nickajacks, 16/- to 17/-; Dunns, 13/- to 16/-; Doherties, 13/- to 17/-; Special, to 18/-; Granny Smiths, 17/- to 21/9; Special, to 24/3, and others from 14/-; Rokewoods, 13/- to 16/-; others, from 8/-; Rome Beauties, 14/- to 16/6; Yates, 16/- to 21/6; others, from 12/-; Statesmans, 13/- to 16/-; Special, to 17/-; Democrats, 14/6 to 18/3; Chandlers, 15/- to 15/9; Loquats, flats, 10/- to 14/-; Special, to 17/-, and others from 7/-. Citrus fruits: Valencias, flats, 8/- to 11/6; special, to 13/-, and others from 7/-; Mandarins, flats, 9/- to 14/-; Special, to 15/6, and others from 6/-; Lemons, 5/- to 8/-; Special, to 11/-, and others from 4/-; Oranges, 6/- to 10/-; Special, to 14/3, and others from 3/-; dumps, 10/- to 14/-; Special, to 17/3; Navels, flats, 8/6 to 12/-; Special, to 13/6; dumps, 14/- to 17/6; Special, to 23/6, and others from 12/-; Passion-fruit, flats, 20/-; Cape Gooseberries, 7d. to 9d. per lb.

Queensland.

Brisbane (25/9/28).

Local Fruit.—Lemons, 2/- to 4/- a half-bushel case; Limes, 1/6 to 3/3; Oranges, 3/- to 5/6; Valencia, 5/- to 7/-; Jaffa, 6/- a bushel case; Navels,

6/- to 13/-; Mandarins, Glens, 5/- to 16/-; Neutrals, 4/- to 12/-; Emperors, 5/- to 18/-; Scarlets, 4/- to 17/-; Excelsiors, to 12/-; Waratahs, to 12/-; Kings, 9/- to 12/-; Papaws, ripe, 2/6 to 5/-; green, 2/6 to 3/-; Pineapples, rough, 9/- to 12/- a case; smooth, green, 8/- to 10/-; ripe, 4/6 to 7/-; Passion-fruit, 7/- to 14/- a half-bushel case; Gooseberries, 6d. to 7d. a quart; Strawberries, 6/6 to 12/-; Specials, higher, a dozen bozes; Loquats, 3/6 to 5/- a quarter-case; Townsville Mangoes, 10/- to 12/- a case. Imported Fruit.—Apples, Tasmania, Jonathans, 10/- to 12/- a bushel case; Dem., 12/- to 14/-; N.Y.P., 10/- to 12/-; S.P.M., 8/- to 11/-; S.T.P., 6/- to 10/-; F.C., 6/- to 10/-; Gref., 8/- to 12/-; Victorian Jonathans, 10/- to 12/-; R.B., 9/- to 10/-; Y., 9/- to 11/-; Pears, Victorian, Jos., 14/- to 16/-; W.C., 12/- to 14/-; P.T., 12/- to 14/-; B.P., 10/- to 12/-; Murrumbidgee Navel Oranges, 9/- to 10/-; South Australian Lemons, 13/- to 15/-.

South Australia.

Adelaide (22/9/28).

Apples, Jon., 6/- to 7/- per case; Cleos., 6/- to 7/-; cooking, 3/- to 6/-; Lemons, 4/- to 5/-; Loquats, 6/- to 8/-; Oranges, 7/- to 8/-; Blood, 8/-; Mandarin, 8/- to 12/-; Navels, 14/-; Poorman, 5/-; Pears, 5/- to 7/-; Pines, 23/-; Bananas, 25/- to 27/- [illegible] crate; Strawberries, 24/- doz. lb.

Tasmania.

Hobart (22/9/28).

Apples.—Del., choice, 7/- to 7/6; small, 2/- to 2/6; Jon., 2/6 to 3/6; F.C.P., 2/- to 2/6; C.P.M., 4/- to 5/-; R.B., 3/3 to 4/6; Dem., 3/6 to 6/-; J.C., 2/- to 3/-; S.T.P., 2/6 to 5/-; S.M.P., 2/- to 3/6.

New Zealand.

Dunedin (21/9/28).

Messrs, Reilly's Central Produce Mart reports under date, 21/9/28, as follows:—Large consignments of Oranges, Lemons, and Mandarins by the "Waikouaiti" and "Manuka" are meeting a steady sale at fair values. The Lemons have been cleared at 16/- to 20/-, and prices for the next shipments should be much firmer. Navel Oranges, 18/-, 21/-; Mandarins, 16/-, 20/-; Valencias, 15/-, 17/-; Joppas, 15/-, 18/-; Queensland Pines, 26/-; Passions, 30/-.

BRITISH AND FOREIGN REPORTS.

Macgeorge and Jardine, fruit brokers, of Liverpool, England, in their latest report, comment favorably on the Victorian Apple pack handled by them this season. They refer particularly to the 'Opossum and Diamond marks, and they congratulate the growers and packers of these particular marks, and promise to do everything possible to popularise these packs. They also consider the adoption of the Canadian case is a great improvement, and that dump cases be abolished altogether.

Hamburg Apple Shipments.

P. Astheimer & Sons, Hamburg, report first cargoes of Apples from West Australia, arrived in green and immature state, and consequently did not find a ready market. Victorian first cargoes were in fair condition, and prices satisfactory, despite the fact that the market was overstocked with American Apples at the time. Altogether, the Hamburg trade handled 825,446 cases of Australian Apples during the season, a number that they did not expect, the previous record being 364,383 cases in 1914. Buyers from all parts of Germany attended the sales, and prices compared favorably with other large European markets.

The shipmen's handled by the trade were:—Tasmania, 199,306 cases; Victoria, 151,766; Victoria and South Australia, 103,584; W.A., Vic., and S.A., 108,880; South Australia, 86,637; West Australia, 23,084; W.A. and Tas., 31,444; Vic. and Tas., 74,275.

Pears and Grapes.

There were only 542 cases of Australian Grapes handled by the firm and sound Grapes brought fair prices. There is no outlet for lots showing signs of decay; 14,962 cases of Pears were handled and prices were satisfactory. Good eating Pears of keeping quality are well liked in Germany.

EMPIRE MARKETING BOARD.

Second Year's Progress.

THE second annual report of the Empire Marketing Board shows that the work of the board has materially strengthened the demand for Empire produce.

The value of imports from within the Empire to United Kingdom rose from £386,000,000 in 1924 to £420,000,000 in 1927, equal to an increase of nearly nine per cent.

"In 1924 the Empire overseas absorbed 41.7 per cent. of the United Kingdom's export of manufactured goods. In 1927 the percentage had risen to 46.1."

The Board, which is an official body, established by Parliament to further the marketing in the United Kingdom of Empire produce from home and overseas, has worked along three main lines—scientific research, economic investigation, and publicity. Progress in each of these divisions is described in the report.

Last year's report mentioned the modest beginning made with the examination of incoming cargoes of Empire fruit. During the year under review, this scheme had notably advanced. Botanical officers of the Board are stationed at the ports of London and Liverpool. Observations are taken in the ships' holds. Cases are examined at the port on arrival, and samples of the fruit are followed to the retail shops for further examination there. This scheme has now been applied in turn to the Canadian, Australian, and New Zealand fruit shipments.

Posters.

The Board has continued and extended the campaign of poster publicity, of which the first steps were recounted in its earlier report. The number of special poster frames has been increased from some 530 in May last to 1,500 in the present month. These frames are now distributed over some 270 towns. They are to be found in almost every town in the United Kingdom with a population of 10,000 or over, and are become familiar to every town dweller. Her Majesty the Queen has been much interested in the posters issued by the Board, and has expressed a wish to see each new set as it is issued.

In last year's report, an indication was given of the support which the Empire Marketing Board had promised, to promote the attack upon insect pests, and, through parasites, upon the kindred plague of weeds. During the last twelve months their proposals have taken shape. The Imperial Bureau of Entomology has employed a grant from the Empire Marketing Fund to establish in a Buckinghamshire country house a central laboratory, which has come to be known as the "Parasite Zoo." Here are bred parasites that have proved their capacities to destroy certain types of insects, and here experiments are being planned for the testing of parasites of yet unproved capacity. **Already, amongst other shipments from this new station, parasites of the blowfly have been shipped to Australia, New Zealand, and the Falkland Islands, and parasites of the earwig to Canada."**

A Pioneer Passes.

Mr. John Brunning, Somerville, Fruitgrower and Nurseryman.

The Australian nursery trade, particularly the fruit tree section, loses a valued member in the death of Mr. John Brunning, of Somerville, Vic. The late Mr. Brunning, who died on September 4th, had attained the age of 65 years, and it was believed there were many years of useful service before him. Consequently, the news of his death came as a surprise to his many friends.

The late Mr. John Brunning was born in 1862 at Brighton, Victoria, where his father, the late William Brunning, and his elder brother, the late George Brunning (father of the present George and Herbert Brunning, of St. Kilda, and the late F. H. Brunning, of Elizabeth-street, Melbourne), carried on a nursery business, whilst two other brothers turned to other walks of life.

In 1866, the late Wm. Brunning, with his wife and family, came to Somerville, and established the Somerville Nurseries on his own behalf, for the propagation of fruit trees—a pioneer in this particular trade. In 1890, the late Wm. Brunning died, leaving his only son, the late John Brunning, to carry on the business which under his guidance grew into one of the largest of its kind in Australasia.

Previous to this time, the fruit grown at Somerville was carted by road, twice weekly, to the market in Melbourne, 34 miles away—and the road being along the sandy coastline, these hardy pioneers walked alongside the carts till Mordialloc (16 miles away) was reached, before getting up and driving the balance of the way.

The late Mr. John Brunning was a very hard-working man, who knew no rest till a job was completed to his satisfaction, sparing himself not at all.

During his nursery career, it is estimated that he propagated by budding alone over 1,500,000 trees, over a period of 45 years, beside grafting many hundreds of thousands, so that he was indeed one of the most practical men in the trade.

The late Mr. Brunning had an extensive knowledge of varieties, which stood him in good stead in the fruitgrowing part of the business. He was amongst the first men to place high value on the Jonathan Apple, planting out the first block of about 175 trees of that variety about 1889, and for many years those trees were the pride of the district, and the forerunner of the huge plantings later.

The Jonathan Apple proved a difficult proposition to manage in pruning (being quite opposite the older varieties then in cultivation in bud formation), and the methods employed to-day are based very largely on the experience gained by the late Mr. Brunning, who freely imparted his experiences to all who were interested.

The Late Mr. John Brunning.

The late Mr. John Brunning, with his father, was instrumental in sending for export to England in 1886 a portion of the first 50 cases of Apples sent by boat to that country, and a bronze medallion is still in possession of the family to commemorate that event.

The late Mr. Brunning did not aspire to the lure of public life outside of the Fruitgrowers' Association, where his word and advice were always listened to with greatest respect, and, in a smaller degree, the Nurserymen's Association—of which he was always a member till later years.

Besides giving advice, Mr. Brunning was a generous giver, and many families have in times of stress been helped over the stile without any thoughts of reward.

When cool storage for fruit became essential, with two others, Mr. Brunning, was prepared, about 1912, to help finance this project at Somerville, but owing to lack of support locally, the project was dropped, and the local cool store did not eventuate till 1919, seven years later, with the aid of the Government then in power.

The advent of the first hand pump, and later the first motor spray pump, in the district was brought into being by Mr. Brunning, who was always on the lookout for newer ideas in the better working of the business.

In the latter part of 1919, the late Mr. Brunning retired from active business, giving the business to his sons, Thomas William and George John Brunning, whilst his younger son, Arthur, became interested in the fruit section—and the business name became John Brunning and Sons. Mr. Brunning continued to interest himself in the work of the business, but in an honorary capacity—for the benefit of his children—his wife having predeceased him by nine years.

The late Mr. John Brunning was aged 65 years, and his death came as a shock to his family and friends. The burial took place at the Frankston Cemetery on September 5th, where many foregathered to pay the last tributes of respect. The Rev. C. R. C. Tidmarsh gave a most impressive address, among which were the words: "That the life of John Brunning was not in vain, and was an example to all." Thus passes one of the pioneers who made the fruit tree and fruit trade what it is to-day, and the world is poorer by his loss.

USEFUL RAISIN RECIPE.

Raisin Rock Cakes.—Three teacups flour, four tablespoons butter or dripping, four tablespoons sugar, three tablespoons seeded Raisins, one piece shredded Lemon peel, two eggs, one tablespoon baking powder, a little milk. Sift flour and baking powder; rub in butter, add sugar, fruit and peel. Mix well beaten eggs, adding a little milk. Put in rough little heaps on the oven shelf, and bake for about 15 minutes in a fairly hot oven.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE." 499 LITTLE COLLINS ST MELBOURNE.

PINUS INSIGNIS.
Seed 8/- per lb.
F. G. STIRLING,
Ivanhoe, Victoria.
'Phone: Ivanhoe 234.

SUPPORT CO-OPERATION

By Consigning your FRUIT to the

Producers' Distributing Society Ltd.

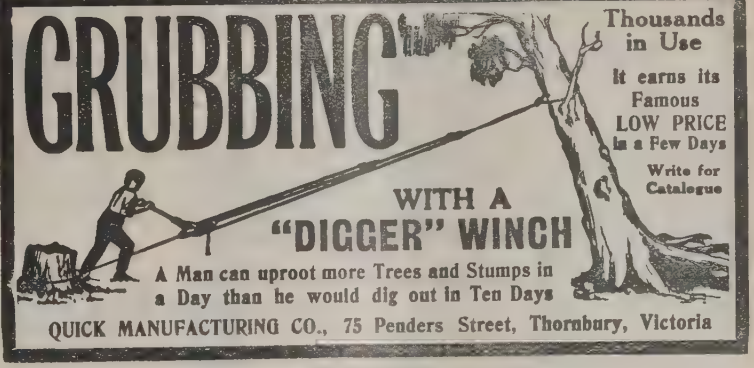
(Late Coastal Farmers' Co-operative Society Ltd.)

Agents for

"BLACK LEAF 40"
and all Orchard Requirements

Melbourne Sydney
Newcastle Hobart
Launceston Devonport

GRUBBING WITH A "DIGGER" WINCH



Thousands in Use

It earns its Famous LOW PRICE in a Few Days

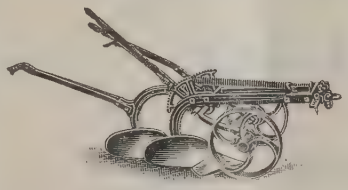
Write for Catalogue

A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days

QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

Please mention "The Fruit World" when writing to advertisers.

SUNSHINE Ploughs for Orchard and Vineyard



THE SUNBIRD. Light in draught. Splendid for burying green manurial crops. Will plough to within a few inches of tree trunks or vines. Cuts furrows 9 in. wide to 6 in. deep. Made in 1, 2 and 3 furrow sizes. Prices, £3/15/-, £14, £19. Less 5 per cent. c.o.d. Terms if desired. Knife coulters, 7/6 each.

Also Manufacturers of—Spraying Plants, Farm Engines, Orchard ploughs and cultivators in many types, Harrows, etc.

General Catalogue Posted Free on Request.

H. V. McKAY Pty. Ltd., SUNSHINE HARVESTER WORKS, SUNSHINE, VIC.

Branches: SYDNEY, BRISBANE, ADELAIDE, PERTH.

Fruchthof-Bremen

Fruchthandel Gesellschaft

Scipio & Fischer

Fruchthof BREMEN Germany

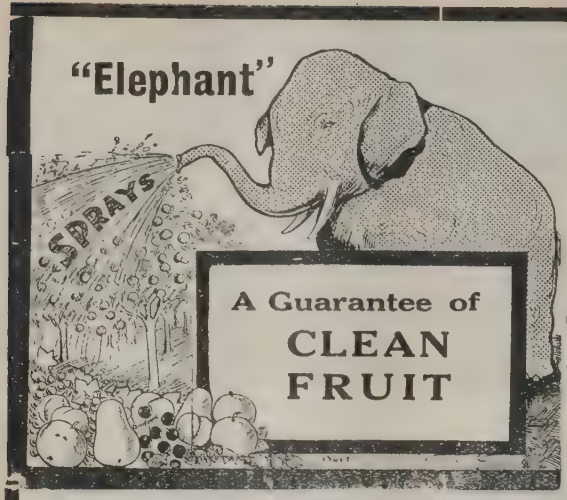
Cable Address: "Orange" Bremen . . . . . Established 1902

AUSTRALIAN REPRESENTATIVES:

Victoria: The International Fruit & Mercantile Co., 410-416 Flinders Lane, Melbourne.

West Aust.: Messrs. Paterson & Co., Ltd., Perth.

Tasmania: Messrs. E. R. Cottier & Co., Hobart.



ORCHARDISTS

Spraying is essential, and your best Insurance. Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand

Sprays Only

NOW IS THE TIME TO ORDER YOUR SPRAYS.

Always Use "Elephant" Brand Bordeaux Mixture Powder

Equal in quality and Price to the best Imported

Lime Sulphur

ALSO ORDER NOW!

"Elephant" Brand

Arsenate of Lead

Paste or Powder

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of "Elephant" Brand Sprays

Manufacturing Chemists, MADDEN GROVE, BURNLEY, E.1., MELB., Vic.

Telephone: J 2008. Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for November 1928

Illustrations.

Citrus Packing House in California 427
Hull, Riverside Quay 433

Subjects.

Answers to Correspondents . 431-456
Apple Industry 432
A.D.F.A. Conference 447
Assistance to Fruitgrowers . . 449
Beekeeping Notes 459
Banana War in Great Britain 456
Canadian Standard Cases . . 456
California Seeks High Tariff 456
Canning Fruits Position 424
Canning Fruits Industry . . 423-5
Citrus Growers at Murrabit 428-9
Citrus News and Notes . . 427-9
Dusting for Pest Control . . 444-6
Dried Fruits Industry 447-9
Doradillo Growers 448
Dried Fruits in U.S.A. 449
Developing British Ports . . 433-4
Export News 434
Electroculture—Christofleau's 431
Fruit Trade with China 432
Insect Pests in the Orchard . . 452
Irrigation in Murray Valley 454-5
Manuring Fruit Trees 426
Markets—British & Australian . . . . . 460-xv.
News & Notes 456
N.S.W. News & Notes 450-1
Poultry Notes 459
Personal 431
Preveting Mould in Citrus . . 427
Queensland 442
Red Scale in Citrus 427-8
Strawberry Culture 430-1
Strawberry—The Ettersburg 431
Trade Representative in Canada 456
Tasmania—News & Notes . . 435-6
Victoria—Crop Prospects, Export & Interstate Trade, Growers' Meetings 436-7-8-9
Victorian Fruit Marketing Organisation 439
West Australia — Cultural Hints Crop Prospects 451

INDEX TO ADVERTISERS.

Books, Publications—

"Garden Lover," Bank House, Bank Place, Melbourne, p. xxv.

Berry Baskets—

Australian Berry Baskets Coy., 185 William St., Melbourne, p. xi.

"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii., xxv.

Canning Machines—

Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. xxii.

Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—

Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—

"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. 452.

Fruit Buyers—

Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. 453.

Fruit Tree Suppliers—

Brunning, John, and Sons, Somerville, p. 422.

C. A. Nobelius & Sons, Emerald, Vic., p. 450.

Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 447.

Two Bays Nurseries, Moorooduc, Vic., p. xx.

Fruit Graders—

"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood Vic., p. 446.

"Harvey-Delany," D. Harvey, Whitehorse Road, Box Hill, p. xviii.

Irrigation—

Pope Sprinklers Ltd., Robert St., Croydon Park, South Australia, p. 455

Manures, Fertilisers, &c.—

Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. 451.

Motor Oil—

"Texaco," The Texaco Co. (A/sia) Ltd., p. xvii

Orchard Ploughs, Cultivators, &c.—

D. Harvey, Box Hill, Melbourne, p. xviii

Buckeye Harvester Co., Whiteman St., Sth, Melbourne, p. 457.

Orchard Requisites—

McPherson's Pty. Ltd., 582 Collins St., Melbourne, Vic., p. xii.

Patent Attorney.—

Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. 446.

Poultry—

Karswood Poultry Spice, Agents all States, p. 458.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—

Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. 453.

Spray and Dusting Material—

"Aero" Brand Arsenate of Lead, A. M. Bickford & Sons Ltd., 42-44-46 Currie St., Adelaide, p. xvii.

"Albarol" White Oil, Lane's Ltd., Abercrombie and Levey Sts., Sydney, p xi.

Arsenate of Lead, William Cooper & Nephews (Aust.) Ltd., Sydney; agents all States, p. xxii.

"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. iv.

"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.

"Elephant" Brand, Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. xiv.

"Gargoyle" Spraying Oil, Vacuum Oil Co. Pty. Ltd., cover i.

"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.

"Clensel," Clensel Pty. Ltd., 184 Queen St., Melbourne, p. 447.

"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.

"Black Leaf 40," Producers' Distributbuting Soc. Ltd., Sydney, p. 448.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Sydney, p. 407.

Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. ix.

"Sulcar" Carbonised Sulphur Spraying Mixture, Sinclare & Co., Box 3, King St., P.O., Sydney, p. 457.

"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 449.

Neptune Oil Co., 365 Kent St., Sydney, and all States, p. xxi.

Spray Pumps and Guns—

"Bave-U" Power Sprayer, Russell & Co., Box Hill, cover ii.

"Friend" Economy Spray, F. R. Mellor, 440 Elizabeth St., Melbourne, p. 455.

"Nufrend," Metters Ltd., 98 North Terrace, Adelaide, S.A., p. xxi.

Ronaldson Bros. & Tippett Pty. Ltd., Creswick St., Ballarat, p. xi.

"Sunshine Sprayer," H. V. McKay Pty. Ltd., Sunshine, Vic., p. xiii.

Strapping Fruit Cases—

Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.

"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. xx.

Tractors—

"Smithco" Friction Lift Co., 110 Sturt St., Sth. Melbourne, p. v.

Transport—

London and N. E. Railway, Burns, Philp & Co., agents, p. v.

Tree and Stump Pullers—

Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc, p. ix., 356.

"Digger," Quick Manufacturing Co., 75 Pender St., Thornbury, p. xiii.

Wire—

Commonwealth Barbed Wire & Nail Works Pty. Ltd., 94 Sturt St., Sth. Melbourne, p. 456.

Fruit Trees Booked Now

for 1929 Planting

APPLES	QUINCES	CHESTNUTS	OLIVES
PEARS	FIGS	GOOSEBERRIES	GUAVAS
PLUMS	CHERRIES	CURRANTS	BRAMBLES
PRUNES	WALNUTS	RASPBERRIES	LOQUATS
ALMONDS	ORANGES	NUTS	PERSIMMONS
APRICOTS	LEMONS	MEDLARS	VINES
PEACHES	MANDARINS	POMEGRANATES	STRAWBERRIES
NECTARINES	MULBERRIES	PASSIONS	RHUBARB
			LOGANBERRIES

Grown on Virgin Soil Only—Each Year a Fresh Block is Planted. No chances for Diseases or Weak Trees.

All Leading Varieties from—

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 1866

One of the Largest Exporters of Fruit Trees to Overseas Clients in the Trade.

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

HEAD OFFICE:

78a VICTORIA STREET, Melbourne, Victoria.

Address all correspondence to

Box 1944 G.P.O. Melbourne

Sydney Office: Post Office Chambers, 335 George Street, Box 2147.L.L., G.P.O. FRANK CLARKE, Representative.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:
Hon. L. SHOOBRIDGE, M.L.C.

THE BRIDGE YOU'LL NEVER CROSS.

It's what you think that makes the world
Seem sad or gay to you;
Your mind may color all things grey
Or make them radiant hue.
Be glad to-day, be true and wise,
Distinguish gold from dross;
Waste neither time nor thought about
The bridge you'll never cross.

There's useful work for you to do,
For hand and brain and heart;
There's urgent human service, too,
In which to take your part.
Make every opportunity
A worth-while gain, not loss;
The best is yours, so do not fear
The bridge you'll never cross.

If life seems drab and difficult,
Just face it with a will;
You do not have to work alone
Since God is with you still.
Press on with courage toward the goal,
With Truth your shield emboss;
Be strong, look up and just ignore
The bridge you'll never cross.

—Grenville Kleiser.

The Canned Fruits Industry

Present Day Problems and their Solution

As Sugar is a major factor, there should be a conference between the representatives of the two industries

MUCH THOUGHTFUL CONSIDERATION is being given to the position of the Australian canned fruit industry. The Development and Migration Commission is preparing a report on the subject. In the meantime, public attention became focussed on the subject because of the statement made by the Minister of Markets (Mr. Paterson, M.H.R.), at a meeting at Shepparton (Vic.), recently.

Mr. Paterson said that in view of the condition of the canned fruits industry, "it might be necessary for the Commonwealth Government to ask the State Governments to co-operate in providing comprehensive legislation to enable collective action to be taken in disposing of the canned fruit pack, both in the Australian and overseas markets, similar to the measures enacted for the dried fruits industry."

At the request of the Development and Migration Commission, members of the Canned Fruits Control Board, and the Minister for Markets, a conference of representatives of private enterprise in the jam and canned fruits industry was convened by Mr. A. W. Palfreyman, Director of the Australasian Jam Company, and the whole question of what steps should be taken to restore the industry to a profitable basis was discussed. As a result, a letter was forwarded to the Development and Migration Commission as representing the considered and unanimous opinion of all the private manufacturers in the jam and canning industry in Australia upon the subject remitted to them. The letter is as follows:—

"While always desiring a full and proper protection for the sugar industry, it was the unanimous opinion of this meeting that the absence of a fair arrangement between the great sugar and fruit industries was the chief cause of all the trouble. The grower of fruit is little concerned whether the produce of his orchard is converted into jams or canned fruit, and the following manufacturing record will prove to you how seriously the manufacturing of jams has been reduced by the high cost of sugar.

"Clearly the sugar industry has been enriched, but, unfortunately, at the expense of the equally important industry of fruitgrowing and jam manufacturing.

While we have no desire to use imported sugar, and would prefer to use Australian sugar, even at a slightly higher cost than the imported, we are convinced that the present deplorable condition of the fruit industry would be relieved if an arrangement were made that, whatever sugar we used in our factories for processing fruit, we would have to pay only the world's parity cost, plus the duty of £9/6/8 a ton, a duty 50 per cent. greater than the duty imposed before the war. This price could be mutually agreed upon and made binding for 12 months, or for three months if the shorter period were desired.

"Alternatively, the jam and fruit canners would be satisfied to have the right to import their requirements of sugar and pay the full duty of 9/6/8 a ton, having recourse to importation only when they were unable to obtain Australian sugar at anything like the same cost. They would give an undertaking of a definite preference for Australian sugar, and would not make any purchase of foreign sugar without first placing full information before any board or authority that may be constituted to protect Australian sugar interests. As the surplus of Australian

sugar is being exported

from Australia and competing in the world's markets, it will, we hope, be recognised that this suggestion is an equitable one, as not only would we be called upon to pay the world's price, but an additional sum of £9/6/8 a ton as well. We understand that manufacturers, like ourselves, in New Zealand and South Africa are paying £21 a ton for sugar for their domestic requirements.

Preferential Trade.

"We would also suggest that an arrangement be made by which Dominion canned fruits would receive a preferential treatment in Great Britain of 2/- a dozen 30oz. tins. At the present time, Australia gives Britain a preferential treatment on tinplate of 10 per cent., which represents a protection or advantage to Great Britain of approximately £140,000 annually. If Great Britain will give an equivalent preference for our canned fruits (in which their tinplates are used as our containers) the Australian canned fruit industry will at once be placed on a sound and satisfactory footing. Failing a reciprocal arrangement of this nature, we suggest that the preferential treatment on tinplates be withdrawn.

Government Financed Orchards.

"It is unnecessary for us to remind you of the causes that have led to overproduction of canning fruit in most of the Australian States. They are entirely traceable to the Governments of the States sponsoring and financing large settlements for the production of these fruits, instead of allowing the natural and progressive development to take place by those who had embarked their own capital in the industry, and were capable of taking care of its fullest expansion. In so doing, we feel that a great injury has been done to "private enterprise" orchardists.

"We feel strongly that the permanent prosperity of the industry will be secured along the lines suggested, rather than by a continuance of export bounties, or any further regulations or interference by State or Federal Governments. In this way, we will shoulder our own troubles and responsibilities, as we certainly should, instead of adding to our present difficulties."

The following is the statement showing the decline of the industry since 1912:—

Year.	Jam Manufactured in Commonwealth.	Population.	Per Capita.
	Lb.		Lb.
1912	85,800,000	4,700,000	18
1925-26	67,300,000	6,100,000	11

Since 1912 the production of jam has decreased by 18,500,000lb., while the population during the same period has increased by 1,400,000 people.

Proprietary Canner's Statement.

In a further statement, Mr. Palfreyman said that the Prime Minister in his policy speech had stated that the Federal Ministry did not want to have any Government interference in business. It wished to do all it could to stimulate and assist private enterprise. On top of that definite announcement the Minister for Markets at Shepparton proposed to

Introduce Control Measures

which would have a far-reaching effect upon the canning and jam industry. He suggested a pool so as to do exactly

what had been undertaken in respect of the control of sugar, butter, and dried fruits. The idea was to surcharge the Australian consumer, and dump products overseas. The report of the Auditor-General for Victoria (Mr. Norris) directed attention to the fact that Victoria had more than £700,000 at stake in the canning industry.

It was well that the position should be understood. If the price of canned fruits were increased by 2/- a dozen, consumption would fall off greatly. Price was a most important factor in the handling of such commodities, and Government interference was the last thing that should be thought of. All that business men asked was to be left alone. Market conditions should not be interfered with, compulsorily or in any other way. The trade in which he was interested did not want to appear as mendicants, or as men who were unable to attend to their business either within the Commonwealth or overseas.

CANNING FRUIT POSITION.

(By a Goulburn Valley Grower.)

THERE is no disputing the fact that the canning fruit business is closely approaching a calamity, and Government ventures, such as irrigation schemes and settlement policies, will in the very near future receive a severe setback. To get a fair summing-up of the position, as it is understood to-day, it is necessary to

take a retrospect

of the last six or seven years.

About that time the effect of soldier settlement began to be felt, fruit was being produced in quantities, outstripping the facilities for processing and beyond the absorption of the then organised markets. With the exception of the Shepparton Co-operative Company and the State factory at Leeton, the trade was controlled by proprietary interests, whose long experience had taught them the futility of processing beyond the limits of distribution.

The reorganisation of Shepparton with its increased output, and the advent of the Kyabram Company, signalised the first real crisis in canned fruit production. Stocks became a drug on the market, and the Federal pool was introduced to save the situation. It certainly did save the canners and growers, but at what cost? When it is remembered that the Right Hon. S. M. Bruce and Sir Victor Wilson were responsible for the sale of large quantities of canned fruit in Great Britain at a price approximating 4/6 per dozen and the local price to consumers was about 10½d. per tin, is it any wonder that an appreciable increase in consumption was immediately apparent.

Let us endeavor to reconcile the reason of the increased sales with part of the statement made by the Hon. Thos. Paterson at Shepparton on October 9. The Minister for Markets declared that the canning industry was entitled to an Australian price on the local market, which, if viewed in the light of the butter stabilisation scheme, means that any losses on overseas sales will be made up by the consuming Australian public.

At the present time, it is recognised that the canning industry must be prepared to export at least 50 per cent. of the output, and it has been authoritatively stated that the loss on Peaches exported is 2/2 per dozen. Therefore, to get out of the export loss, the canner must obviously inflict an imposition of 2/2 a dozen over and above a fair value on the local buyer.

What must be the result of attempting to squeeze the consumer? If a reduction in price were necessary to quit stocks in the pool period, is it not feasible to assume an increase in price will retard sales, and eventually a 50 per cent. export will be increased to 75 per cent. with the need of extracting a further 1/- from local consumers. Mr. Paterson should remember it is possible to juggle with the necessities of life, but it is a different thing with canned fruit, a commodity the public can do without.

To continue the examination since the pool, we find that three years later the second crisis occurred. Stocks had accumulated to the extent of becoming a nuisance.

The Federal Government was not inclined to adopt the same expensive measures to rid stocks as the pools had proved, and what is known as the "Eromanga" episode cleared the stocks. Three more years have transpired, and the

third crisis has eventuated.

The Federal Government, having exhausted its inventiveness in the previous two efforts, is absolutely destitute of any idea what to do, and the canned fruit industry has crashed, a cut-throat policy is being indulged in to cash stocks, every cannery chasing the other, and the grower expecting to foot the bill.

The production of fruit offers the best inducement for land settlement, insomuch that the calling is congenial: a comfortable income should be certain from small areas, say, about 25 acres; the Empire spirit is more pronounced to-day than heretofore. Under an Empire trading arrangement, Great Britain would absorb many times our present production, but one cannot expect the Old Country, struggling to meet heavy taxation due to the war, to further tax herself in order that Australia may enjoy a higher standard of living than operates in any other country.

In consequence, if we are to compete with other fruit-producing countries, our costs of production must come down, and to accomplish that, growers and canners must combine in pressing for relief from the iniquitous handicaps that are forcing the fruit industry into stagnation.

Effect of Sugar Embargo.

The principal factor in bringing about the present situation is the sugar embargo.

Sugar is quoted (25/10/28), c.i.f. & e. Melbourne, at £10/15/- per ton. Allowing for the duty of £9/6/8 per ton, the price, delivered, would be just over £20. Yet the price which the Australian fruit industry has to pay for its 40,000 tons of sugar is £30/6/8 per ton. The imposts (apart from duty) is about £10 a ton, or approximately a total of £400,000.

The duty on canning machinery is 60 per cent. ad. val., and a duty is paid on softwood timbers for case-making, which cannot be substituted by local timbers. In addition, wages have been based, not on what an industry can economically pay, but on what a workman can spend. Is it any wonder that year after year a bonus is requested from the Federal Government? There is every indication in the canning fruits district that breakers are ahead, and it would be advisable for a Select Committee to be appointed to inquire into the respective merits of the canning industry and the sugar industry with the intention of eliminating one or the other, seeing that it appears impossible for both to survive under existing conditions.

CANNED FRUITS.

(To the Editor of "The Fruit World.")

Sir,—Each grower of canning fruits who was able to see beyond the end of his nose, forecast the present position years ago, but we have been helpless to stem the tide, owing entirely to Government interference in business, of which it was and is, quite ignorant. Surely the reasonable requests made by the proprietary canners that supplies the sugar be made available at world's parity, plus a duty of £9/6/8 a ton (which is 50 per cent. greater duty than before the war) and that preferential treatment of 2/- a dozen from England on canned

fruits shipped to Great Britain be set off against the tariff of 10 per cent. in favor of British tinplates, which amounts to £140,000 annually, are fair.

No "spoon-feeding" is necessary if the State and Federal Governments will only

remove the obstacles

they have placed in the way of the industry's success. The growers find themselves controlled two-thirds of the way, being between Arbitration Courts and tariff impositions that apply to all articles required on one side and sugar prohibition with fictitious prices for local production on the other, and there is thus no payable outlet for their fruits when they are canned.

Governmental Activities.

If the Government saw fit to finance large settlements for growing and canneries for processing and packing these fruits it is only reasonable to ask that proper steps be taken by the Government to market the surplus pack overseas, so as at least to return to the growers the cost of production.

The grower now faces another season which promises a good crop, with the knowledge that a large proportion of last year's canned fruit is still unsold.

At a meeting recently held at Shepparton, the Minister for Markets (Mr. Paterson) made different promises to the growers. We accept his assurance that everything is being done with Great Britain to obtain a payable market for our fruits, but until this is arranged, which may yet be some considerable time, it is essential

that relief be granted

immediately to enable growers to carry on and to create a feeling of security about the disposal of next season's crop, on which a lot of preparation and expense is still necessary.

Most of the growers in the Goulburn Valley are in a serious financial position. They have not yet been paid for last season's fruit, and they are not likely to be paid for some time.

The Sugar Policy.

Owing to the Government's sugar policy, sugar-growers are waxing fat, and their land values have advanced from £14 to more than £100 per acre. Against this orchard property in the Goulburn Valley has depreciated from £150 to an unsaleable level, and there is no hope of selling at any price. If the Government considers it essential to continue its sugar policy, which concerns about 4,000 cane-cutters in Queensland, mostly immigrants from Southern Europe, we fruitgrowers claim that adequate measures of protection should be granted to growers of canning fruits, comprising 35,000 to 40,000 Australians, who are depending on this industry for their livelihood, and many of whom have invested all their capital in and devoted their lives to building up a business which can be destroyed by the Government in one stroke.—Yours, etc.,

A. LENNE.

Ardmona, October 12.

Sales of Australian canned fruit were effected in Great Britain during the week ended October 6, 1928:—

Apricots	100	cases
Peaches (halves) ..	6,299	„
Peaches (sliced) ..	150	„
Pears	6,272	„
	12,821	„

The total sales from the commencement of the season to October 6 are, therefore, as follows:—

Apricots	34,020	cases
Peaches (halves) ..	138,676	„
Peaches (sliced) ..	51,308	„
Pears	70,655	„
	294,659	„

A CONFERENCE SUGGESTED.

Sugar and Fruit Interests Should get Together and Thresh out their Problems.

It would appear from reports published in Queensland, that there is much misconception regarding the effect of the sugar embargo on the Australian fruit industry.

The statement published in the Queensland "Producers' Review," that only 8 per cent. of the Australian fruit crop is used for canning and jam making is very misleading. To arrive at that figure all the fruits produced in Australia—Bananas, Papaws, Apples, Oranges, etc., are included. But of the fruits grown for canning and jam making, Strawberries, Raspberries, Peaches, Figs, Quinces, etc., from 60 per cent. to 95 per cent. are used in manufacture.

Other statements of a similar nature go to show that misconception should be cleared up. This would be better done by a conference of those concerned, instead of by a war of words.

Australia is yet young in her nationhood. On matters of big policy we need patience and tolerance, and the earnest spirit of goodwill to bring about the best means of developing our Commonwealth.

Two great industries are involved —sugar and fruit. Must they always be at war?

There is no better way of arriving at a mutual understanding than by the leaders of the industry conferring.

There is no better time than the present for such a conference to be held.

Obituary

Deep sympathy is extended to Mr. and Mrs. E. Pritchard and family, of Harcourt, Vic., in the loss of their daughter (Mrs. Jackson), on October 20. Mrs. Jackson leaves three young children, one a baby ten days old.

Mr. Pritchard recently suffered an injury while at work, and the thoughts of his many friends go out in sincere sympathy in a special matter in this time of suffering and family bereavement.

DEATH OF GEORGE C. ROEDING.

One of the best known men in the California fruit industry, Mr. George C. Roeding, died recently. The late Mr. Roeding was President of the California Nursery Company, one of the largest floral nurseries in California, and was a former member of the U.S. Department of Agriculture Committee. He was responsible for the successful transplanting of the Smyrna Fig, from its native land to California. Roeding made a thorough investigation, and discovered the tiny wasp, and its relationship to pollination through the Capri Fig, and solved a riddle that had baffled experts for many years.

The "Friend" Nozzle.—Mr. F. R. Mellor, 440 Elizabeth-street, Melbourne, C.1, is advertising the "Friend" spray nozzle in this issue—economical, and saves spraying material. The combination of two nozzles gives a fine large cloud, and saves time in spraying operations, thereby reducing the cost of labor. This spray is favorably known among orchardists.

PINUS INSIGNIS.

Seed 8/- per lb.

F. G. STIRLING,

Ivanhoe, Victoria.

'Phone: Ivanhoe 234.

MANURING FRUIT TREES.

Maintaining Fertility.

(By J. J. Pascoe.)

A FRUIT TREE must be well nourished to enable it to withstand disease and to give maximum production. The soil fertility is taxed in fruitgrowing as in agriculture, and to live on one's capital is to invite disaster. The men who do not scientifically cultivate and fertilise their orchards condemn themselves to an existence on the bread line.

Essential Plant Foods.—Substances essential to the growth of trees and vines are named plant foods, and are collected by them when in solution in the soil.

The plant foods in which Australian soils are likely to be deficient are phosphates, nitrogen, potash and, in certain areas, lime.

Phosphates (superphosphate and bone) stimulate early root development in young trees, and promote general vigour, so hastening maturity. In old trees they help in the development of fruit buds and fruit rather than of leaf and branch.

Nitrogen (nitrate of soda, sulphate of ammonia, and blood) encourages luxuriant growth. Where deficient in the soil trees have stunted growth, scanty foliage of a yellowish colour, and their general appearance is sickly.

Potash gives extra vigour, and tends to make trees resistant to disease. It encourages the formation of sugar and starches, intensifies the colour of fruit, improves quality, and enables it to keep and carry better to distant markets.

The chief function of lime is to improve the texture of the soil and liberate the plant foods.

Farmyard manure supplies these substances, in addition to organic matter. The plant foods mentioned give their best results when there is in the soil an ample supply of organic matter derived from farmyard or green manuring.

Phosphates will counter-balance the excessive absorption of nitrates from the soil. If trees are making too much growth at the expense of flower and fruit an application of superphosphate will help them produce more fruit.

If young trees are not growing freely enough, especially in a poor soil, and are developing flower buds instead of wood, a little nitrogen will do good.

The leaves of a tree may be large if there is an ample supply of nitrogen; but they may be thin; potash will thicken them. Soils which do not contain a good percentage of clay may be deficient in potash, and its use under these conditions would be justified.

Cultivation.—It is useless to expect that manures will give good results if cultivation is neglected. Good fertilisers, like good nursery stock, at best can only be a help in the production of satisfactory crops. Indeed, neglect in cultivation shows itself sooner than the neglect in the application of manures. Heavy manuring, with poor cultivation, does not produce the big crops in wheatgrowing; it will not do it in fruitgrowing. In either case, it may even depress the yield.

Manurial Experiments. — Unfortunately for fruitgrowers, few tests in manuring orchards have been systematically carried out by Australian Departments of Agriculture.

A test conducted by the Victorian Department on the property of Mr. S. W. Laugher, Murrabit, tentatively shows that with Oranges 4 cwt. nitrate of soda, 4 cwt. of bone dust, and 2 cwt. of sulphate of potash per acre give the most encouraging results. Satisfactory returns are obtained where superphosphate replaces bone dust.

The Victorian Agricultural Department is initiating manurial tests with Apples, Pears, citrus and stone fruits under "dry" and irrigated conditions.

Irrigation Conditions.—In the Goulburn Valley and irrigation areas, where stone fruits are chiefly grown, superphosphate, sulphate of ammonia, nitrate of soda, and blood are applied freely. To maintain organic matter (humus) rank growths of weeds, or sown leguminous crops, are ploughed under, and this practice is known as green manuring.

A prominent and successful orchardist at Ardmona, who has studied chemistry, has worked out a system of manuring through years of experimenting, which gives him dependable crops. In the autumn he sows legume, such as Tick Beans or Dun Peas, at the rate of 1 to 1½ bushels of seed and 1 cwt. of superphosphate per acre. The growth is ploughed under in the spring, when the flowers are turning into pods, a disc implement being used. In September, 5 cwt. of superphosphate per acre is applied and ploughed under to sustain Peach and Pear trees when the buds are swelling.

In November and December,

to assist the fruit to swell, 2 cwt. of sulphate of ammonia or nitrate of soda per acre is ploughed under—if not tucked underneath the nitrogenous manures are liable to be washed down the furrows. Where blood is used, double the quantity is applied; blood is the slowest acting, ammonia the next slowest, and nitrate of soda the quickest.

The annual allowance is thus 6 cwt. of superphosphate and 2 cwt. of nitrogen. Potash has been tested in applications of from 1 to 4 cwt. per acre alongside control areas (not manured), and no improvement in crops was detected. However, in another district, and under different conditions, a similar treatment might be more than justified. On this orchard the experiments are continuous. At present one area is getting superphosphate alone (with green manuring); another is getting nitrogen alone, and a third is not manured. Most profit is obtained where superphosphate and nitrogen are applied; next best profit is derived from superphosphate and a leguminous crop ploughed in. Weeds are not allowed to grow. **The policy is thorough cultivation and less irrigation.** Compared with other orchards, this property is cultivated twice oftener in summer and autumn, and two waterings are saved. Cost of manuring is, roughly, £3 per acre.

(To be continued.)

The Australian Citrus Industry

Organisation : : Export : : Pest Control

Local, Interstate and Overseas Items

PREVENTING MOULD.

Oranges for Export.

Departmental Tests.

The N.S.W. Department of Agriculture is carrying out experiments in the export of Oranges from Australia (states the "Farmer and Settler"), and has purchased more than 200 cases in the Gosford and Griffith districts, consisting of Valencias, Mediterranean Sweet, White Silettas and Navels. Two-thirds of this fruit—all of which will be sent to London—is being treated by a patented process received from California, which, it is claimed, will prevent mould development.

The fruit has been picked and treated in the Gosford district under the direction of the departmental citrus expert (Mr. R. J. Benton), and in the Griffith district by Mr. G. W. Beverley. Packed in Californian cases of one and one-third bushel capacity, the fruit left Sydney on Saturday last.

The experiment, if successful, may open the way to the export overseas of considerable quantities of Australian citrus fruit in the future. The incidence of disease in such shipments has always made export exceedingly risky.

RED SCALE IN CITRUS.

Because of the difficulty in crontrolling red scale in citrus, there has been increased interest on the part of investigators. The economic loss caused by this pest is recognised in all citrus-growing countries.

Much interest has been shown in U.S.A., and research work is being carried out with different types of red scale, especially those affecting Lemon trees, as many scale insects are apparently immune from or resistant to fumigation.

In N.S.W. the Department of Agriculture recently issued regulations for the compulsory spraying or fumigation of affected trees. It has been found that the best time to attack the scale by spraying is when the young insects are moving.

As the scales grow and become darker in color, the insects go through several changes, or moults, which occur under the shell or armor. The armor of the female has two moulted skins in-

Interior of a Citrus Packing House, near Los Angeles, California.

corporated in it. The average life cycle of the female has been computed at about ninety days, thus permitting three to four generations a year. The effectiveness of the methods of control varies with different districts and climatic conditions, and growers with infested trees should consult the departmental experts.

RED SCALE ON CITRUS.

Fumigation or Oil Spraying Compulsory.

The attention of N.S.W. citrus growers is directed to the Proclamation under the Plant Diseases Act, 1924, published in the Government Gazette of September 14 last, prescribing the treatment to be adopted for the prevention of red scale.

All owners and occupiers of any land or premises within the State on which is any Lemon, Mandarin, Orange, Kumquat, Grape Fruit, Lime or Citron tree infested by red scale, are warned that it is now compulsory to take one of the measures laid down in the Proclamation.

Every tree of any of the abovementioned species must be subjected to fumigation for at least forty-five minutes with hydrocyanic acid gas, generated under a cover of calico or canvas, in sufficient quantity to kill the scale, or sprayed with a mixture of miscible oil and water at the necessary strength, and so that the spray comes in contact with every part of the tree.

MEXICAN FRUIT FLY.

The citrus growers of Texas, U.S.A., have been visited by the Mexican fruit fly, and over a million Grape-fruit trees are involved. Much of the infected fruit has been distributed in the Eastern States, but California has taken strict precautions to prevent the entry of any fruit from the infected area.

The Mexican fruit fly has been known to exist in Mexico as a serious pest for many years, where it completes its life cycle from egg to adult fly in about three months. There are thus four generations in a year under Mexican conditions. The adult fly is about the size of the ordinary house fly, and is straw-yellow in colour.

U.S.A. EMBARGO.

The embargo against the importation of Spanish Grapes and Oranges into the United States still continues. The presence of Mediterranean fruit fly in the Spanish orchards was the cause of the American embargo.

CITRUS GROWERS AT MURRABIT.

Statement by Victorian Central Citrus Association.

(To the Editor.)

We recently had the privilege of reading in your paper the report of the meeting of citrus growers at Murrabit, and would like to reply to some of the points raised.

The report, doubtless a fair record of the proceedings, is packed full of misrepresentations, inaccuracies, innuendoes and misconceptions. The purpose of those unfounded assertions is obscure, and many growers who have spoken to us on the subject have expressed the deepest regret that growers should have such little regard for their own welfare as to make reckless charges against a co-operative organisation formed for their own benefit. The criticism could not have been more severe had it been directed against an alien body and one seeking the destruction of unity among growers, instead of one which has admittedly put thousands of pounds into their pockets, protected their interests and taken many steps to safeguard the future of the industry.

Growers at the meeting referred to were invited to make specific charges against the Victorian Central Citrus Association, and the first to accept the invitation went back to the year 1923, to state that he had received an account sale from an accredited agent showing that some of his fruit was wasty, and that when he pressed for substantiation of the statement, he received a letter stating that the fruit was not wasty, and he was subsequently paid for the full consignment. Personally, we have no knowledge of the case, but are having inquiries made.

We say without any hesitation that had the agent been guilty of any wrong doing, his agreement with the V.C.C.A. would have been terminated immediately. Any such incident would have been taken up at once on behalf of the grower and pressed to finality. In any case, to try to prove that present-day administration of the V.C.C.A. is faulty because of something alleged to have occurred in 1923, when the organisation was in its swaddling clothes, can hardly be termed constructive criticism.

Another speaker asserted that growers did not select the accredited agents. This is contrary to fact. The first nomination of accredited agents was made by ballot among all growers, and the final selection by delegates from Victorian and South Australian districts at an open conference. After a year or two the agents wanted to revert to the 10 per cent. commission basis and their agreements were, therefore, not renewed. The selection of a new team was left by the delegates to the directors, and the required number was secured, embracing several of the former accredited agents. At the next conference, the agents' appointments came up for review, and no objection was raised to the same team being voted back again. Growers have the right to select the agents at each annual conference, and will have the same right at the next annual conference. If, in the middle of the season it is deemed necessary to make a change in the personnel of the agents, the directors naturally carry out that duty. Surely it would not be contended that the heavy expense of calling a special conference in the middle of the marketing season should be incurred for the purpose of appointing an agent.

Another assertion was that Mr. Cook is a member of the firm of Cook, Tomlins & Mirams. That is another falsehood. He never was a member of that firm, and has no interest in it whatever. Neither is he any relation of the Mr. P. P. Cook, who is a member of it. When a grower makes a statement like this publicly, and says "he has it on good authority," readers may judge what reliance can be placed on his other criticism. Mr. Cook devotes the whole of his time to the V.C.C.A., and any insinuation that he is employed by anybody else is pure fiction.

(The foregoing statement was not published in the "Fruit World."—Ed.)

The method of the election of the directors was questioned. The reply is that the practice followed is similar to that of any other company. The directors are, and always have been, elected by the shareholders. Casual vacancies in the board are filled by the directors, and the persons so elected must resign at the next annual meeting, but are eligible for re-election by the general body of shareholders. In what other way can directors be elected than by the shareholders?

Limitation of agents was another matter adversely criticised. The majority of growers decided on this policy, and a majority can alter it. The management is not to blame for carrying out the policy laid down by growers.

Mr. Cook was charged by one grower with having said that 80 per cent. of the Queensland fruit that reached

the Melbourne market went through the accredited agents channels. He states that he never made that statement. What he said was, that from one district in Queensland, where an effort had been made to organise the growers for Melbourne marketing purposes, 80 per cent. of the Oranges sent to Melbourne had come to the accredited agents. This was based on a report supplied by our then market representative. He specifically stated that fruit from uncontrolled areas in Queensland, went outside. The grower who puts up an Aunt Sally in a position from which he can easily knock it down, and then backs himself to the extent of £50 on the result, is not in danger of losing his money.

This same grower advanced two other arguments which appear to contradict each other. He said that people complained that they could not buy at the V.C.C.A. published prices, thus inferring that they were too high, and yet he said that outside agents were getting 1/- to 2/- more for similar fruit! Apart from this curious piece of logic, we say definitely, that buyers can operate on V.C.C.A. prices. Mr. Fred Lee, of Leeton (N.S.W.), who owns a packing house and sends fruit in accordance with the wishes of growers, to both inside and outside agents, recently said that the V.C.C.A. published prices were the truest index to the Melbourne market he had ever received. These quotations are put forward as a general indication of values of fair average quality standard fruit. If a buyer wants a special line, he must pay more for it, and if a line is below standard, naturally the price is less. In this way the competition among the agents to get the best possible prices is preserved. Outside agents operate on these values, and sometimes get more or less, as is the case with the accredited agents, but without the regulation of the market by the V.C.C.A., the general level of values would be lower, and all growers would suffer.

In conclusion, may we make an appeal to Murrabit growers to drop this sniping at their own organisation. If they want to destroy it they are going the right way about it, but before they complete their task, let us know what they propose to erect in its place. A thing is easy to destroy, but very difficult to build up. If any Murrabit grower has a practical scheme to bring forward which will function in the interests of citrus growers better than the present organisation, all he has to do is to have it approved by his own district, and then bring it forward at the annual conference. If the other twenty citrus districts forming the V.C.C.A., agree with his views, the change can be made. There is only one rule we know of in a civilised country, and that is majority rule.

A. W. SCHWENNESEN,
DUNCAN B. HALHED,
Directors,
Victorian Central Citrus Association,
per B.S.B.C.
October 18, 1928.

MURRUMBIDGEE GROWERS MEET.

At the general meeting of the Murrumbidgee Fruitgrowers at Leeton, N.S.W., last month, the following levies, recommended by the Finance Committee, were adopted as being the best means to finance the Association, and enable the growers to obtain their objective of a permanent paid Secretary:—Currants and Lexias, 1/8 per dried ton; Sultanas, 2/6 per ton; Prunes, Apricots, Peaches, and Pears, 5/- per dried ton. Canning fruits, half of one per cent. Fresh fruit, halfpenny per case, farthing half-case.

Mr. B. S. B. Cook, V.C.C.A., told the meeting that the V.C.C.A. was seriously affected by the uncontrolled fruit from the Leeton area, which sometimes flooded the Melbourne market. He did not ask Leeton growers to keep off the market, but to market their citrus under controlled conditions, and so assist in keeping up prices.

If the V.C.C.A., said Mr. Cook, could receive a S.O.S. that 5,000 cases of citrus were being forwarded to Melbourne from Sydney or Leeton, then the Association could adjust the market accordingly, and not have to put up with the uncomfortable feeling of knowing that their buyers were going to outside agents. If growers forwarded to the accredited agents of the V.C.C.A., the agents would charge them 7½ per cent.

RENMARK SPRING SHOW.

THE citrus display at the Renmark Spring Show, held on October 1, was well up to the standard of previous years, and was one of the outstanding features of the show.

There was good competition in Washington Navels, Mediterranean Sweets and Late Valencias, and the quality shown was excellent. In the Mandarin section, an excellent late variety in "King Siam" scored a meritorious first.

The chief prize-winners were:—Collection of Citrus: J. W. Clark. Washington Navel: A. F. Harrop. Navel: H. S. Taylor. Bloods: C. H. Katekar. Mediterranean Sweet: C. H. Katekar. Jaffa: J. W. Clark. Rio: J. W. Clark. Paper Rind St. Michael: C. H. Katekar. Valencia Late: C. H. Katekar. Queen: J. W. Clark. Parramatta: J. W. Clark. Seville: M. B. Geneste.

Mandarins: Messrs. J. W. Clark, C. H. Katekar, and H. S. Taylor secured most of the prizes.

Case of Oranges, packed for export: C. R. Aslin (Hockney Bros.).

REMARKABLE GROWTH OF SOUTH AFRICAN FRUIT TRADE.

Since 1910, South Africa has steadily forged ahead with fruit production, and to-day that country is a serious competitor on the European markets in some varieties of fruit. Some idea of the enormous expanse of South Africa's fruit trade may be had by a study of the following figures.

South African Exports.
(In Boxes.)

	1910.	1927.	1928.
Peaches . .	23,646	326,463	178,223
Pears . . .	98,704	347,655	997,339
Plums . . .	25,025	241,470	219,973
Nectarines . .	2,581	35,708	32,584
Grapes . . .	46,806	499,880	456,434
Pines . . .	835	35,328	17,361
Mangoes . .	Nil	381	1,130
Apples . . .	90	6,709	2,219
Oranges . .	Nil	845,023	—
Grape Fruit	Nil	36,961	—

Including all kinds of tropical fruits, South Africa despatched abroad 1,924,461 boxes of fruit.

"FRUIT WORLD" APPRECIATED.

The Editor, "Fruit World."

Dear Sir,—I find the "Fruit World" very interesting. Although I have been in the fruit line for 27 years, I still find something fresh in every issue.

(Signed) G.C., Ardmona.

SOUTH AUSTRALIAN FRUITGROWERS.

At the annual meeting of the South Australian Fruitgrowers and Market Gardeners' Association, the following officials were elected:—President, Mr. L. J. Wicks; Vice-President, Mr. W. H. Ind; General Secretary, Mr. W. J. Kimber; Committee, Messrs. J. Turner, G. W. Summers, J. Donaldson, C. H. Ragless, F. Staniford, A. O. Peterson, H. Robson, R. Townsend, R. Hunter, and J. B. Randell.

STRAWBERRY CULTURE

Experiences in New Zealand :: Harvesting :: Pest Control

By P. EVERETT, Orchard Instructor, Thames, N.Z.

Continued from page 400, October Fruit World

Harvesting.

In the picking and packing of Strawberries for market the fruit should never be touched by hand, but rather handled by the stalk. When picking, the stalk should be pinched off between the thumb and forefinger, and not pulled until it breaks, as is often done by careless and inexperienced pickers. This practice of pinching is quick, gives an even length of stalk, and does not injure the crown of the plant. When facing the top layer of berries in a punnet, the same practice of handling by the stalk should be adopted; this will be found to materially assist in avoiding bruising of the fruit. Punnet-carriers (or trays) should be sufficiently large to contain four filled punnets. This size is desirable, because when the carrier is placed on uneven ground it will not readily fall over. A supply of empty punnets can be carried, telescope fashion, under the punnets that are being filled. As each punnet is filled, it should be left in the field to be collected by others, care being taken that the fruit is not unduly exposed to the sun. On bright sunny days the punnets should be collected as soon after they are filled as possible. In small gardens a suitable carrier to use when collecting punnets is one constructed to carry three tiers, with space for eight punnets on each tier. For large areas, a wheelbarrow with a specially constructed body that will carry two tiers of punnets is most satisfactory. A two-wheeled handcart is to be avoided on account of the difficulty of preventing the wheels from damaging the plants.

Fungus Diseases and Insect Pests.

Leaf-spot (Mycospharella fragariae): A fungus disease known as Strawberry leaf-spot is common on many varieties throughout New Zealand. Circular brown-coloured spots, approximately $\frac{1}{8}$ in. in diameter, are produced on the foliage. Where the infection is severe the mature leaves may be almost completely covered by these spots, killing the tissue of the part affected and consequently preventing the foliage from functioning as it otherwise would. Periodical sprayings with Bordeaux mixture at the following formula during the early summer months will satisfactorily control this disease:—Sulphate of copper (bluestone), 4 lb.; quicklime, 4 lb.; water, 40 gallons. The Melba variety is almost immune from attacks by leaf-spot, whereas Marguerite is very susceptible.

Grey mould (Botrytis sp.): This disease causes considerable decay of partially matured fruit on the plants, and in certain seasons heavy losses of fruit between picking and marketing. It first appears as a brown discoloration, which spreads rapidly over the whole berry, causing decay. The disease thrives best in damp, still air conditions, and is found most destructive to fruit on plants growing in poorly drained soils, especially in weedy plantations and during heavy rainfall. Fruit which has been picked damp or held under close atmospheric conditions is most likely to develop decay before marketing. All berries showing signs of grey mould should be discarded at picking time, so as not to contaminate sound fruit in the same container. Diseased fruits should be destroyed, as they rapidly become covered with the fine grey powdery growth of the causal fungus which is largely responsible for the spread of the disease.

Strawberry-mildew (Sphaerothea humuli): This is sometimes met with in New Zealand. Occasional applications of lime-sulphur at a strength of 1 to 100 will guard against the disease.

Red mite (Bryobia pratensis) and red spider (Tetranychus telarius): These pests are frequently met with in Strawberry gardens, particularly on plants allowed to remain for the second-season crop. The insects are dull-red in colour, and the former are minutely small, being barely discernable with the naked eye. Being sucking insects, they can do considerable damage to the foliage if not kept in check. Control measures consist of spraying with lime-sulphur at 1–100 plus Black Leaf 40 at 1–800, whenever the pest becomes troublesome. As these insects live principally on the underside of the leaves, it is important that the spray should be directed upwards. This can be done by the use of a nozzle that sprays at an angle of 45 degrees from the rod.

Green aphis (Myzus sp.): This sucking insect is not uncommon in Strawberry plantations throughout the Dominion. It is usually most troublesome on the young leaves as they emerge from the crown, and on the underside of the foliage. A thorough spraying with insecticidal sprays, such as lime-sulphur or Black Leaf 40, will effectively control this pest.

Large brown beetle (Odontria zealandica): In certain parts of New Zealand more damage is done to Strawberry plants by this insect than by all other insect pests and fungus diseases combined. The beetle is most active during the dusk of evening, and where sufficient numbers are present they seriously damage the foliage by chewing the young and tender leaves. In addition to the damage that may be done to the foliage, this pest causes far more extensive injury to the plant when in the larval state. The beetles deposit their eggs round the crown of the plant, and on hatching, the grubs bore their way into the ground, where they live on the roots, frequently destroying every root that the plant possesses. No satisfactory means of controlling brown beetle, either in the larval or

beetle state, has so far been found. Plants that are grown for one season only are not seriously troubled by the larvae, consequently where the pest is very troublesome, replanting every season is the only way of combating it.

Spraying.

A barrel of sufficient size to contain 25 gallons of spray mixture, fitted on a wheelbarrow, with a well-constructed light pump attached, will be found suitable for spraying operations in Strawberry gardens. A horse-drawn spray outfit cannot be recommended, except in areas of some 10 acres and upwards.

* * *

The writer is indebted to Mr. W. H. Rice, Orchard Instructor, Auckland, for information on various points, more particularly with reference to diseases and insect pests; also to Mr. W. K. Dallas, Orchard Instructor, Dunedin, in connection with varieties grown in Otago, etc.—"N.Z. Journal of Agriculture."

THE ETTERSBURG STRAWBERRY.

In reply to the question asked by a South American correspondent, as to the relative value of the Ettersburg Strawberry, the following letters (in addition to those published last issue) have been received:—

Answer (by G. Williams, Director of Fruit Culture, Brisbane).—The Ettersburg, or Tree Strawberry, was introduced into Queensland some years ago, and "boosted" by a nurseryman. It never gained prominence; in fact, planters were sceptical as to its being a true Strawberry, but, as it failed to fruit, they were unable to verify their suspicions.

The principal Strawberry grown in this State is the Phenomenal, which gives particularly good returns, and is all round satisfactory. Aurie was largely included a few years since, but has practically given away to Phenomenal. About three years since a collection of approximately twenty (20) varieties was imported from England, but they were either unsuited to the climate, or the quality under local conditions did not nearly come up to that of the Phenomenal. A quantity of seed was imported from America, from which several hundred plants were raised, and distributed to various growers in Southern Queensland, but nothing equal to what had already been tried originated from them.

Answer (by J. M. Ward, Superintendent of Horticulture, Victoria).—The Ettersburg Strawberry certainly has not revolutionised Strawberry-growing in Australia. It was boomed considerably on its introduction. This variety holds its berries well up above ground, but the berries are too small to be sold for dessert purposes. It is grown in some places for jam-making and for factory sale; and it is quite suitable for this, as it is a good cropper.

There are several varieties of Ettersburg, No. 80 being the one grown in Victoria. Nos. 84 and 89 ar reputed to be better than No. 80; but it must be repeated that on account of their size, these are only jam berries.

BERRY BASKETS.

There is a big demand for the new non-returnable regulation bucket adopted by the United Berry-growers' Association. The bucket, which holds 12lb. of berries, is made of the usual berry-box material, but is edged with metal, and has a removable metal handle. It is being made at the factory of the Australian Berry Baskets Company, 175 Kent-street, Richmond. All kinds of berry containers are manufactured by this enterprising firm, and the factory is working at full pressure to meet the demands of the coming season. Growers are reminded that the new 12lb. buckets are only obtainable through the United Berry-growers' Association.

CHRISTOFLEAU'S ELECTRO-CULTURE.

Conflicting Experiences.

As reported in our last issue, a New Zealand subscriber sent us a copy of a statement made by the Minister for Agriculture in the N.Z. Parliament, as follows:—

Experiments with this method of electroculture have been carried out in New Zealand, but no benefit appears to have been derived from the process. This confirms information received from the authorities in Paris that the actual capacity of such apparatus to bring into play appreciable quantities of electrical energy capable of influencing the crops is practically nil, and that there is absolutely nothing to sustain the statements and declarations given in the explanatory pamphlets issued in connection with it, these being in direct opposition to the fundamental laws of electricity.

. . . . .

A letter is also to hand from a well-known N.S.W. grower, who installed the apparatus, and who doubts its efficacy.

. . . . .

Messrs. Law, Somner Pty. Ltd., nurserymen and seedsmen, of Melbourne, sole agents for Victoria, who are well known and long established, state that they are carrying out tests at their own nurseries. They are in possession of letters from various parts of Australia and New Zealand, warmly appreciating the Christofleau electroculture system. One letter stated that on land which had proved worthless for growing Passion Fruit, was now under this electroculture process producing excellent crops. For other fruits and vegetables, appreciation has been freely expressed.

Already, Messrs. Law, Somner Pty. Ltd., have proved the existence of the electric currents between the North and South posts, in fact, the actual amount of electricity generated can be recorded on their testing apparatus.

However, the firm state that they have withdrawn the Christofleau electroculture process from sale in Victoria, pending further tests, which are being made. In the meantime they would welcome experiences from users of which there are many hundreds in Australia and New Zealand.

Personal

Mr. W. H. Everard, M.L.A.

Improvement in Health.

Sympathy has been freely expressed from all parts of the State to Mr. W. H. Everard, M.L.A., in his recent illness. Mr. Everard also suffered a sad bereavement in the loss of his brother.

It is pleasing to know that Mr. Everard is now considerably improved in health, and it is hoped that his restoration will soon be complete.

The services of Mr. Everard to the fruit industry have won cordial appreciation.

Mr. D. J. Walters has been appointed Chairman of Directors of the Murrabit Packing Co., in place of Mr. A. W. Schwennesen, who recently resigned.

THE APPLE INDUSTRY.

Suggestions for Improvement.
Eliminating Rough Handling: Advantages of Bud Selection.
Export Items.

A Grower's Views.

In a recent interview, Mr. H. J. Willoughby, of Tyabb, who is an earnest worker for the organising of the industry, suggests that many improvements are possible. In particular—

(1) The handling of the fruit for export on the wharves is very rough, and all too much damage is done before the ships leave Australia.

Mr. Willoughby stated that he had noted from reports that American Fruitgrowers' Organisations had their own representatives on the wharves supervising the loading and preventing rough handling.

Export was vital to the Apple industry, and growers should pay attention to this very important phase of doing all in their power to see that the fruit left these shores in as good condition as possible.

(2) The idea, published in the "Fruit World," of inviting Mr. A. D. Shamel, of California, who has a world-wide reputation in the improving of fruits by bud selection, to visit Australia, is warmly commended.

Mr. Shamel's work in improving varieties of citrus, Pine-apples, Bananas, sugar, Peaches, and other deciduous fruits, is well known.

If the Federal Government were to invite Mr. Shamel to come here, he could lay down a programme for the improvement of varieties by bud selection, which would not only improve the quality of the fruits, but also the yields per acre, and thus be of great economic importance to Australia.

Mr. Willoughby is thoroughly in accord with the idea of the Fruit Cool Stores' Association taking over general welfare work, and matters of policy affecting the industry.

APPLES FOR SCANDINAVIA.

Markets for Apples that might be improved, so far as Australia is concerned, are the Scandinavian markets. Sweden imports on an average 533,000 boxes of Apples yearly. These are supplied by the following countries:—United States (293,000), England (102,000), Italy (47,000), Denmark (29,000), Germany (28,000), Holland (10,000), Russia (10,000), Australia (7,000), Canada (2,000). Sweden imports fruit to the value of £1,250,000 yearly, and the chief imports are Apples, Bananas, and Oranges, in that order.

An advertising campaign was recently initiated in Sweden by fruit merchants, and as a consequence an increased consumption of fruit may be expected.

Norway, Sweden's neighbor, imports 245,000 boxes of Apples yearly, made up as follows:—United States (151,000), England (28,000), Holland (15,000), Denmark (4,000), Czecho-Slovakia (3,000), Italy (2,000), Australia (2,000), Belgium (1,000).

Denmark imports 474,000 boxes of Apples yearly, and again United States figures as the chief exporter, while England, Australia, and Canada are at the bottom of the list of exporting countries.

THE CHINESE MARKET.

What America is Doing.

During 1922 to 1926, China imported from the United States fresh fruits, chiefly Oranges and Apples, valued at £554,800 annually. 1927 figures are expected to be considerably higher. These figures prove conclusively that there is a market for fresh fruit in China, and that Americans have not been slow to avail themselves of the opportunity offered.

In addition to Oranges and Apples, China imported annually 3,594,000 Lemons, valued at £17,400, of which 3,465,000, or over 95 per cent., were from the United States. Imports of other fresh fruits totalled 656,000 bushels a year, with 396,000 bushels, or 60 per cent., from Japan, 118,000 bushels from Hong Kong, 52,000 from Macao, 37,000 from Chosen, 33,000 from the United States, and smaller quantities from Canada, Siam, Russia, and the Philippine Islands.

The above statistics of fresh fruits imported into China do not include imports into the port of Hong Kong, which is under British control and not part of China politically. Statistics of imports of fresh fruits into Hong Kong are not available.

FRUIT TRADE WITH CHINA.

(By Jas. H. Lang, Harcourt.)

In the "Fruit World" for October, a review of the Chinese fruit trade was made, also the statement that it is a pity Australia can't get a share of the trade in the opposite season.

There is no doubt that a profitable trade in fresh fruit could be developed with China, provided satisfactory transport facilities could be obtained.

The only boats with refrigerating space call at Hong-Kong, and thence direct to Japan, avoiding Shanghai on account, I believe, of the high port charges.

As there is a hundred per cent. duty on fruit entering Japan, this makes consignments to that country out of the question.

There remains only Hong-Kong. From this port, there is no refrigerating space available on boats trading with the mainland, and, as the only cool store specialises in meat, its temperature is too low for fruit.

Immediate sale is necessary, and, as the number of buyers is limited, the price offered is fixed by them, and the consignor has no option but to accept. If it were possible to send the fruit to Shanghai or Japan, the price at Hong-Kong could be fixed by the consignor, and not the buyer. The Americans have an advantage here, as they can forward their fruit to Manila if the Hong-Kong price is unsatisfactory.

What, then, is the remedy?

Present public opinion would not favour a reciprocal treaty with Japan, and we could not expect any concession from that nation regarding our fruit without giving some trade concession in return.

A few weeks ago, a deputation of fruitgrowers waited on the Acting Secretary for Markets (in the absence of the Minister), requesting that a subsidy be given to steamers that call at Shanghai, with a view of developing trade not only in fruit, but also in other commodities. The Department of Markets has referred the matter to the Board of Trade for investigation.

A NOVEL BRAND.

A method of branding Apples is used by an Austrian orchardist. He places a wax design on each Apple while it is green, and when the fruit is ripe, the wax is removed. The portion covered by wax remains green, and stands out in contrast to the rest of the ripened fruit.

Developing British Ports

The Importance of Hull

Some Diary Jottings

(By R. E. Boardman.)

EVER INCREASING INTEREST is being displayed by Australia and New Zealand in the ports of Great Britain.

While London holds a prominent position because of her vast population, yet the other ports of the United Kingdom are of vital importance to the Dominions.

The Port of Hull.

Hull is a thriving city on the east coast of England. Numerous manufactures are carried on.

Fruit landed at Riverside Quay, Hull: Note the railway facilities.

Hull has many natural and geographical advantages as a port for sea-borne cargoes, and for distributing the goods once they are landed. Also as regards outward cargoes Hull holds an unique position to handle an immense trade with Continental Europe.

Here are a few facts which immediately strike the imagination:—

Ships arrive daily from and sail to Continental ports, Spain, France, Holland, Germany, Norway, Sweden, Denmark, Finland; Mediterranean countries, America, Australia and elsewhere.

There are 11 docks, with a water area of 232 acres. Up-to-date equipment is installed for rapid loading and discharge of cargoes.

The shipping tonnage at Hull ranges around seven million tons annually.

The Hull fruit trade is extensive. Imports of hard fruits and onions from the Mediterranean, America, and the British Dominions during 1925-6 amounted to 2,640,438 packages.

The docks present an animated scene at all times. The docks are owned by the London and North-Eastern Railway Company (the largest dock-owning company in the world), having the enormous capital of £400,000,000.

It was a pleasure to be brought into contact with the L.N.E.R. Co. and its efficient officers. The executives are evidently planning on broad lines with a far-seeing policy. Hence, among other things, their desire to cultivate trade with the overseas Dominions, believing it to be of mutual advantage. The company's officers, commencing with Major H. S. Cole, in Australia, who gave me the first introduction, right through the several branches of the enterprise which I was privileged to see, showed the same pride in their work, loyalty to their company, and unassuming courtesy which is the hall mark of the cultured Britisher.

Hull is of first-rate importance to Australia because of the large trade in wool which goes through this port. There are vast wool sheds adjacent to the several docks. The King George and the Alexandra Docks are specially suitable for the handling of large wool imports.

The fruit handling facilities are up-to-date; the dock accommodation and the arrangements for unloading and delivery are such that perishable cargo can be handled with the utmost promptitude.

Fruit is sold in Hull by auction and by private treaty. There are two auction sale rooms, the one in which the bulk of business is done is the Humber-street sale room; it is a comfortable building, with a seating accommodation for several hundred people. The seats are arranged in semi-circular fashion, tier above tier, the focal point being the auctioneer's rostrum, in front of which the samples appear, being elevated on a lift from the storeroom immediately below.

Buyers can, of course, inspect the bulk consignments at the docks and warehouses and mark their catalogues before attending the sales. The system works admirably: it is fair both to buyer and seller. Sales can thus proceed in a business-like manner when there is mutual confidence between the parties concerned.

I was there during the time that the American and Canadian Apples were on the market. It made the picture complete to have seen the fruit on the trees in the American orchards, the packing in barrels and boxes, the loading at New York, and, finally, the discharge at English ports, and the sales methods.

Australian fruit is well spoken of, but buyers point out that the interests of Australian growers would be best served if the fine points demanded by English buyers were fully appreciated. To see American fruit in clean softwood boxes, neatly labelled, with the actual number of Apples therein stamped on the labels: grading and packing perfect, and further to recognise that such fruit could be obtained in long lines and in repeat orders was to have to admit that in these matters Australia was not yet fulfilling the requisite market conditions for securing top prices. Buyers state that the recent and steady im-

provement in Australian grading and packing is most pleasing.

Comparisons are "odious," but one can only speak faithfully of impressions. As between U.S. and Canadian boxed Apples there appeared to be no difference, both being up to a high standard of excellence. But there was—as far as I was able to notice—a marked superiority in the American barrelled Apples over those from Nova Scotia. The American barrels (a barrel contains three bushels) were well packed, and the barrels neatly finished off and labelled—a workmanlike job. The Nova Scotian barrels were rough in comparison, and brought shillings less at the sales.

The port of Hull serves a population of 13 million people. The large towns in what is known as the "distributing area" of Hull receive their supplies from this port.

Our readers in Australia, New Zealand and elsewhere must try to imagine Hull as the centre of a network of railways to serve many populous districts, and as the rail freight is less to these towns than from other ports, it is natural that wholesale buyers come here to have their needs supplied.

The idea is to secure a system of distribution combining efficiency with economy. From the Riverside Quay, Hull, for example, cargoes can be unloaded direct to railway waggons for inland destinations.

In conclusion, I would like to express appreciation for many courtesies received at Hull and for the readiness with which information was supplied.

Hull is businesslike and progressive, and includes among her citizens men of outstanding ability, who in developing their important centre think favorably and often on the far-flung Dominions of Empire.

Notes on other ports and impressions of England will be published in later issues.

A CLAIM FOR DAMAGES.

A lawyer received the following letter from a country client.

"Dear Sir: My boy was knocked over by a motor-car near our farm, but was not hurt. The number of the car was 11780. Find out the owner, and if he is rich, sue him at once. Notify me when you have brought an action and I will hit the boy in two or three places with a hammer."

FRUITGROWER VISITS UNITED KINGDOM.

C. H. Ragless, of Eden, S.A., With Scottish Delegation.

Covent Garden "In Wrong Place, and Should be Removed."

Mr. C. H. Ragless, fruitgrower, of Eden, S. Australia, has just returned, after visiting England and Scotland with the Scottish delegation. Mr. Ragless is full of enthusiasm because of the hearty manner in which the delegation was received not only in England and Scotland, but also in Canada, through which country he and many others returned on the homeward journey.

Australian products, particularly fruits, received much publicity. Mr. Ragless mentioned several points in conversation: He believes there will be increased sales of Australian dried fruits: Glasgow is asking for direct shipment of goods from Australia—this is the principal port of the north; improvements are needed in the packing of our Apples; Covent Garden is in the "wrong place"; too congested and "higgle-piggledy"—should be removed elsewhere. He saw Peaches sold at 3/6 each (not per lb. or per dozen), and quality poor at that. England grows wonderful Strawberries, red and black Currants, Raspberries, but their home-grown Apples and Pears were not up to Australian quality. French Apples and Pears were also inferior.

1929 PEAR EXPORT.

A meeting of the Victorian Pear Export Committee, convened by the Metropolitan Fruitgrowers' Association, was held on September 20, at Melbourne.

Present (Metropolitan Section), J. Tully, J. Stevens, E. J. Lawford, W. Thiele, J. W. Aspinall; (cool stores), J. H. Lang, W. E. James.

Export Handling Committee, S. J. Perry, J. B. Mills.

Mr. J. Tully was voted to the chair.

1929 Export.

It was resolved that the Victorian Pear Export Committee request the Export Handling Committee to arrange for three boats under Somerset conditions, with a total carrying capacity of 45,000 cases for the 1929 season, the first boat to sail about February 14, the others during the months of March and April.

That the Campbells Creek growers be written to, asking for their cooperation in appointing a delegate to work on the Committee.

ANOTHER COMPETITOR.

A new competitor on the English market is Chili (South America). The first trial shipment of green fruit arrived at Liverpool in June, and consisted of 1,000 cases of Apples and Pears. The Apples were Rome Beauty, Yellow Newtown, White Winter Pearmain, and Hoover.

The shipment was accompanied by a Government official, and arrived in good condition. Prices have not yet been disclosed.

ENGLAND'S FRUIT IMPORTS.

The following figures show (in short tons) the enormous quantity of fruit imported into England during an average year. These figures are compiled from United States Commence reports:—

Apples	335,422
Pears	32,985
Plums	28,415
Cherries	7,757
Currants	5,367
Strawberries	3,073
Gooseberries	3,008
Tomatoes	138,784
Apricots	3,146
Bananas	673,659
Grapes	54,819
Grape Fruit	9,387
Lemons	72,702
Limes, etc.	33
Peaches	917
Oranges	432,802
Unenumerated	24,652

A NEW APPLE—EPICURE.

A new Apple was shown at a recent meeting of the Royal Horticultural Society (England), which was considered of sufficient merit to be entered for the Bunyard Cup competition for the most promising seedling Apple.

Epicure is a seedling raised from Wealthy, crossed with Cox's Orange Pippin. It is about the size of Irish Peach and is marked and flushed with crimson on the sunny side, the shaded side being greenish yellow. The eye is closed and set in a shallow basin; the stalk is thin and wiry, about ¾in. long, and set in a conical cavity about half its depth. The fruit is slightly ribbed, especially towards the eye. The flavour is very agreeable; the flesh is on the soft side, juicy and sweet. It is an early dessert Apple of promise for market.

Tasmania.

Apple Crop Light : : Frost Damages Apricots
Export and Interstate Trade

AFTER a comparatively dry and warm winter, the weather conditions underwent a remarkable change during the early spring months.

September and early October will long be remembered as one of the wettest and most stormy periods that has been experienced.

Fungus Diseases Feared.

The continuous rains have prevented orchardists from carrying out cultural operations, and in many cases it has not been possible to apply any sprays after the "dormant" period. Under the circumstances, the prospects for the coming season do not appear too promising, and it is feared that the weather conditions will be conducive to the development of fungus diseases.

At the time of writing, the Apples are approaching the "pink" stage, and from the blossom indications it is evident that some of the principal export varieties, such as Cleopatra, French Crab, and Scarlet, will have much lighter crops.

The returns from the cold stores now show that the fruit that is held in the different districts is now being drawn on for interstate export, approximately 14,000 cases of Apples being left in cold storage. Fruit shipments to interstate markets are proceeding, although the strike has somewhat disorganised the trade.

The total exports of Apples and Pears to mainland ports now approximate 1,350,000 cases, the bulk of such shipments being forwarded to the Sydney and Brisbane markets.

Apricots and Frost Injury.

Following the wet and cold conditions which were generally prevalent at the blossoming period, a frost was experienced throughout the southern districts on September 22. The intensity of this varied a good deal, some centres only recording a light visitation, but it is evident that a number of low-lying areas in the Bagdad and S.E. districts suffered injury, and the crops on these will be very light in consequence.

On some areas the opinion is expressed that the thinning that has taken place will prove beneficial and relieve the grower of a lot of tiresome work later in the season.

There is very little demand now for small-sized Apricots for jam-making, and growers are endeavouring to produce a greater proportion of large fruits for the canning and drying trade, the quality Apricots being generally sought after by processors for these purposes.

Election of State Fruit Advisory Board.

The election of the producers' representatives upon the Board is now being conducted, and the nominations for the different districts closed on the 8th inst.

There will be no contests in the S.E. and Cygnet divisions, Mr. O. J. Morrisby (Sandford) and A. Davies (Cygnet) being returned un-opposed.

In the Huon division, Mr. W. H. Calvert, M.L.C., will contest the seat with Mr. V. Griggs. Franklin and the Esperance and Kingsborough division will be decided between Mr. B. J. Pearsall, M.H.A. (the Chairman), and Mr. O. R. Scott (Geeveston), whilst Mr. M. J. Calvert, of Lenah Valley, will endeavour to displace Mr. T. J. Eddington for the Central Division. The poll, which is carried out by postal ballot, is conducted on the Hare-Clark system, the representatives being elected for a period of two years.

Division of Horticulture.

In pursuance of the plan approved for the reorganisation of the Agricultural Department, two recent appointments have been made. Mr. T. D. Raphael has now joined the staff as horticulturist, and will be stationed at Hobart, being primarily engaged in experimental and research work.

Mr. Raphael, who is a graduate of the Cambridge University (Horticulture), received his training at the English research stations, and latterly occupied a position on the Empire Marketing Board, being engaged in the investigations which are conducted in the marketing of fruit in the United Kingdom. He possesses a first-hand knowledge of the problems and storage diseases which are encountered in respect to Tasmanian fruit exports, which should be of value to the industry.

Mr. A. S. Brennan Appointed Horticulturist and Packing Instructor.

Fruitgrowers will be pleased to know that the Horticultural Division of the Department of Agriculture has been further strengthened by the appointment of Mr. A. S. Brennan as Horticulturist.

Mr. Brennan will be principally engaged in packing instruction and the standardisation of fruit. During the coming season the packing classes will be continued and extended, with the assistance of temporary instructors throughout the fruit districts, on an organised basis.

Mr. Brennan is a Tasmanian, being born at Franklin, in the Huon district. Besides having specialised in fruit packing, he is also a practical orchardist, and has had valuable experience in the culture of deciduous fruits under Tasmanian conditions. During recent years he has held a number of responsible positions in Tasmania and on the mainland, and has managed some of the well-known co-operative packing sheds.

Arrangements have been made for Mr. Brennan to be stationed at Franklin for the present, and his services will be also available to orchardists in respect to grafting, mixing and application of sprays, pruning, thinning and other orchard operations.

State Fruit Advisory Board.

A MEETING of the State Fruit Advisory Board was held at the Department of Agriculture, Hobart, on September 19,

Previous to the meeting, the Board waited upon the Hobart Marine Board to discuss improved facilities for handling fruit on the Hobart wharves. A conference was held, during which the essentials for better handling, stacking, and adequate covered accommodation for fruit consignments were ventilated.

Messrs. H. Jones & Co. submitted cost for an experimental shipment of pre-cooled fruit (20,000 cases) during the 1929 export season.—Action deferred.

Overseas Freight Representative.

The Prime Minister wrote requesting the Board to appoint a representative on the Authoritative Board created for the purpose of considering any proposed increases in freights in respect to vessels purchased under such agreement from the late Commonwealth line of steamers.—It was decided to nominate the Chairman (Mr. B. J. Pearsall, M.H.A.).

State Guarantee Label.

Consideration was given to the scheme brought forward by the Fruit Expert, for the adoption of a State Guarantee Label for overseas exports. The suggested design was approved, and it was decided that the following conditions be laid down for the use of such label:—

(1) The label to be available to exporters packing consignments in well-made, clean, seasoned

cases, the end-pieces having a planed outward surface.

(2) Cases must be clearly and neatly stencilled with the exporter's name, the shipping number, variety, and size, according to the approved arrangement, on one end of the case.

(3) Exporters should be recommended to confine shipments under this brand to the best export varieties in lines of not less than 15 cases.

Sizes of fruit to be limited to 2¼ in. to 2¾ in.

SHIPPING AGENTS AND ADVISORY BOARD CONFER.

A conference of shipping agents and members of the State Fruit Advisory Board was held on September 25. The meeting was held in camera, in order that a free and frank discussion on matters before the conference, be made.

Shipping Charges.

After discussing the question of shipping charges, an agreement was reached that the agents would carefully examine the shipping charges, together with costs of the necessary services, with a view to adopting any economies that can be obtained in co-operation with the growers towards reductions during coming seasons.

It is understood that the shipping agents will meet at an early date, with a view to securing effective co-operation with growers and shippers in the arranging of space and forwarding of fruit.

Distribution of Fruit on Overseas Markets.

In discussing this matter, members emphasised the necessity for equitable distribution of shipments.

Resolved: "That the Secretary of the State Fruit Advisory Board request the Secretary of the Overseas Shipping Refrigerated Tonnage Committee, to obtain information in regard to—

(a) Anticipated sailing dates;
(b) Anticipated itinerary and destination;
(c) Dates of arrival at destination;
(d) System of refrigeration at destination;

in respect to vessels which may be available in Australian waters for the transport of fruit during the 1928 season."

Handling of Fruit for Export.

Consideration was given to the appointment of a fruitgrowers' representative on the Hobart wharf, who could act in growers' interests to prevent rough handling of fruit.

In view of the difficulties in carrying out any effective work because of the dual control of fruit inspection, it was decided to request the Federal authorities to review their decision in regard to this matter.

It was decided to make strenuous efforts to secure the complete loading of holds in Hobart, thus avoiding the opening of holds to receive fruit at mainland ports.

Railway Trucks.—The Commissioner of Railways, in reply to a deputation, said the box type of waggon was being constructed in order to give growers better facilities.

THE TOMATO INDUSTRY.

Growing in Importance.

THE Tomato industry continues to make progress, and there has been a big increase in the number of growers in various States of the Commonwealth, who are growing this fruit under glass. For years South Australia led the way on the Victorian market for early Tomatoes, but this season it will have keen competition from Victorian growers. New South Wales growers, within a few miles of Sydney, will be on the early market with glass-grown fruit, and should they market the crop in good condition, many growers will be installing glass-houses who have for years been facing heavy losses through hail, heavy rains, and frosts.

In Queensland, where the annual Tomato crop is valued at £200,000, a Committee recently imported seven varieties of wilt-resistant stock from America. Samples were distributed among 1,700 registered growers, and results are being awaited with interest.

Tasmanian Apples

Orders for Apples carefully handled and undertaken for all Overseas & Interstate Markets.

E. R. COTTIER & CO.
88 COLLINS STREET,
HOBART - - TASMANIA
Tel. add. "ERCOT," Hobart.

Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

Victoria

CROP PROSPECTS.

Apples Light; Pears Medium to Good.

FRUIT CROP PROSPECTS for the coming season are estimated as follows by Mr. J. M. Ward, Superintendent of Horticulture:—

Apples.—On present appearance, the Apple crop will be light to very light. What appeared to be blossom buds have, in many cases, broken in leaf. Blooming very irregular. Many blooms very weak, and in cases where fruit has set, it appears to be at a standstill. Probably the Apple crop will not exceed 35 per cent. of the average. Partial failure, due to several causes, the chief being the exhausting crop of last season. Unsuitable weather at blooming time and the absence of interpollinating insects also contributed to the failure of the blossoms to set fruit.

Pears.—Pear crop patchy, but will be much better on present appearance. Packham's Triumph has set a good to heavy crop in the metropolitan district. Williams B.C. also carrying a medium to good crop. Other varieties very light to heavy. Unless there is a considerable fall later, there should be a 75 per cent. crop.

Peaches.—Dessert Peaches in the metropolitan districts heavy; most varieties will require thinning. In the Goulburn Valley the green aphis was responsible for a much poorer setting than was expected. Peach crop of the southern districts estimated at a 100 per cent. one; Goulburn Valley from 60 to 70 per cent.

Later.—A very severe infestation of green aphis has seriously reduced the crop. Loss estimated at £50,000.

Apricots.—This fruit has set well in all districts, and, providing there is no abnormal fall at the stoning period, there will be a heavy crop.

Plums.—Good to heavy in all districts, and this also applies to Prunes.

Cherries.—Like all the stone fruits, there is a promise of a good average crop.

Passion Fruit.—The vines escaped frost damage, and there is every indication of a good crop.

Berry Fruits.—The prospects of a good crop of berries of all kinds are very promising.

The season has been favorable to plant growth and all kinds of berry fruit plants, including Strawberries, are in a healthy, vigorous condition.

Reports have been received of damage by frost and hail, but the damage done will not appreciably affect the position.

Taking the fruit crop as a whole, the returns to growers should be up to the average.

Viticulture.

The vines have sprouted late this year, but the show of fruit is excellent. The recovery of badly frosted vines in the Mildura districts is most gratifying—Sultanas have a good "show." Even Zante Currants, on which the spurs were entirely killed by frost, and which had to be pruned to wood not usually considered fruitful, are showing fruit.

There is every reason to look forward to a good vintage.

Citrus Crop.

Good rains have fallen throughout the citrus areas, and citrus trees are looking well. There is an exceptionally heavy blossoming of all trees, and a good promise of a heavy setting. Navel Oranges are still being marketed, but prices are low for ordinary lines. The Lemon market is well supplied, and prices, generally, are only fair.

Tyabb.—We understand that Mr. H. B. Jackson, accountant, of Melbourne, has been appointed to act as Secretary of the Tyabb and District Co-operative Cool Store. The previous Secretary, Mr. T. H. Houfe, has many personal friends among the fruitgrowers of Victoria, and they will be pleased to hear that he has made a good recovery from his recent severe illness.

Most of the orchardists in this neighbourhood have had a disappointing season, abundance of fruit, and considerable labour in handling it, but with poor prices for the fruit.

The prospects for the coming season look more hopeful, however, as it is anticipated that prices will at any rate be payable. Pears appear to have set well.

The Jonathan is the principal variety of Apple grown here, the blossom has been patchy, some orchards better than others, and in the individual orchards, some trees better than others.

Generally speaking, there is more bloom on the Jonathan trees than might have been anticipated after the heavy crop they bore last season; perhaps the large amount of rainfall during the summer assisted the trees to form fruit-buds, in addition to swelling-out the Apples.

At the time of writing (October 12), it is hardly possible to tell how this blossom will result; many of the varieties relied on for purposes of cross-fertilisation are only blooming lightly this year—though the Jonathan seems to require that assistance in setting more in some seasons than in others.

In any case, if other districts are similar as regards late fruit, there should be a good sale for Jonathans.

In this district, Five Crown and Rome Beauty trees are only showing a small amount of bloom, and in many orchards it is the off year for Reinettes.

Harcourt Orchards.

The orchards of Harcourt were first started in the "fifties," when the gold rush was attracting thousands of people from all parts of the world to the vicinity of Castlemaine and Bendigo. The first fruit trees were obtained from an orchardist at Greensborough, and carted in a dray to Harcourt by William Eagle. These trees were planted by Eagle and two brothers, William and Henry Ely, and thus commenced an industry that has proved so profitable to the Harcourt district.

An exhibit of Apples from Australia sent to the Colonial and Indian Exhibition held in London during 1886, was probably the commencement of Australia's export Apple trade.

Contributors to that exhibit were Messrs. James Lang, Henry Ely, and William Eagle, and a bronze medal was their reward. Two years later, Messrs. Lang and Ely sent 400 cases of Apples to the London market, where they were sold for 1/- per pound. Harcourt now contributes 80,000 to 100,000 cases of Apples each export season to Australia's overseas quota.

Altogether, there are 2,500 acres under fruit at Harcourt, which yield in an average year—220,000 cases of Apples, 60,000 cases of Pears, and 20,000 cases of other fruits.

Irrigation has played a big part in the development of Harcourt. There are two storages on the Coliban River, one at Kyneton, and another at Malmsbury, while the reservoir at the foot of Mount Alexander is another source of supply.

The water is conveyed by channels in an easy grade to the orchards, and the yearly consumption is something like 150,000,000 gallons.

* * *

Owing to the prolific crops last season, the yield in Harcourt will be light this season. In some orchards the trees did not even bloom.

Somerville.—The annual show of the Somerville Fruitgrowers' Horticultural and Agricultural Association will be held on March 12, 1929. The Secretary is Mr. S. S. Gault, Somerville, Vic.

E. BURWOOD FRUITGROWERS' ASSOCIATION.

The East Burwood Fruitgrowers' Co-op. Association Ltd. is doing useful work amongst fruitgrowers, and shows a satisfactory balance-sheet. Meetings are held on the second Thursday of each month at the Mechanics' Institute, Burwood, at 8 p.m. A discussion on cool storage by Cr. W. Mock will take place at the November meeting. Other subjects to be dealt with at monthly meetings include:—Lectures on Lemon Culture, by Cr. Stevens; illustrated lecture on "Insect Pests," by Mr. Farrell, Government Superintendent of Orchards, and general discussion on "Manuring," to be led by Mr. A. Stevens.

The officers of the East Burwood Fruitgrowers' Association are as follows:—President, Mr. Andrew Stevens; Vice-Presidents, Messrs. P. Penn and Fred. Fankhauser; Treasurer, Mr. J. H. Tainton; Secretary, Mr. G. C. Karnaghan.

Lecture by Mr. R. E. Boardman.

Mr. R. E. Boardman, editor of the "Fruit World" and the "Garden Lover," gave an address on dealing with phases of the fruit and horticultural industries in Hawaii, U.S.A., Canada, and England, on October 11. Mr. A. Stevens presided over a good attendance.

Mr. Boardman spoke on varied phases of fruitgrowing, co-operation and marketing in U.S.A., and of marketing in England. There was much to admire in the efficiency of the methods of fruit production and pest control in the United States, particularly on the Pacific Coast, where conditions were comparable to Australia. Much valued research work was being carried on—similar research work was needed in Australia. Strict attention was paid to standardised grading and packing.

On the English markets Australian fruit was appreciated, continued the lecturer, and the fact that improvements were being steadily made in grading and packing was favorably noted. Certain advantages held by U.S.A. and Canada were the long lines of standardised fruit in approved varieties as compared with a multiplicity of varieties and brands from Australia; also market research was continuous and growers in U.S.A. were kept fully advised as to the requirements of the several markets.

Mr. Boardman spoke of the facilities for handling fruit at the ports of London, Liverpool, Manchester, Hull, and Newcastle.

A vote of thanks was accorded, on the motion of Mr. Geo. Mock, seconded by Cr. J. Stevens, J.P.

METROPOLITAN FRUITGROWERS' ASSOCIATION.

An executive meeting of the Metropolitan Fruitgrowers' Association was held on October 4. There were present, Messrs. W. Mock (President), W. T. Seiler, J. Stevens, W. A. Webb, J. Tully, and the Secretary, Mr. J. W. Aspinall. Mr. G. B. Minns, Superintendent of City Markets, attended by invitation.

Opening Hour, Victoria Market.—Melbourne City Council wrote, confirming their decision to revert to four o'clock opening for a period of six months.

After Mr. Minns had reviewed the situation, it was resolved that this executive regrets the action of the City Council in reverting back to four o'clock opening at the Victoria Market, seeing that a large number of producers, having had experience of the later opening, are satisfied with same, and we trust that when six o'clock opening is again established there will be "no surrender."

Citrus Importations.—Circular received from Victorian Citrus Association, drawing attention to shipments of citrus fruits from Sicily, due to arrive from October 19 to February 18.—Resolved that executive support the Citrus Association in any action taken to safeguard the interests of growers in this State.

Wastage at Victoria Dock Stores.—The storage of fruit in the Government Cool Store, at Victoria Dock, was severely criticised, as a large percentage of waste was reported to have occurred.

It was decided to support a deputation to endeavor to receive some redress for those growers who have suffered very considerably.

GIPPSLAND FRUIT MARKETING ASSOCIATION.

Substantial Progress Made.

Matters of importance were discussed at a general meeting of the Gippsland Fruit Marketing Association at Pakenham on 10th inst.

It was agreed that crop prospects for 1929 were not very promising. Many trees had failed to produce fruit buds, and the tempestuous weather throughout the last few weeks had prevented the bees from visiting the blossoms. It was doubtful whether the number of cases of fruit to be exported would total half that of the 1928 season.

"Canadian" Standard Case Recommended.

There was an animated discussion as to the type of case to be adopted. Mr. H. G. Colombie said that the major portion of the sea-borne cased fruit arriving in the United Kingdom was packed on the bulge, and strongly recommended the use of the Canadian standard case. This case, with its springy boards, allowed the fruit to be firmly packed at the shed, and gradually contracted as the fruit shrank on the journey. The out-turn of the fruit from the Canadian standard was much better than that from the dump, and because of its better landing condition, often represented 1/- per case more to the grower. In the dump case, the fruit was either too tight and showed marks of case bruising, or it was too loose, and was sold as a slack case.

It was decided that the Association use only the Canadian standard case for export in 1929; that the fruit be wrapped in printed and colored paper, and that the Association label —the "Opossum" brand—be placed on both ends of the case.

Surprise was expressed that the New South Wales Agricultural Department had not yet recognised the Canadian standard case in its regulations governing the receipt of fruit to the Sydney markets. The Gippsland Fruit Marketing Association intended to put its fruit on the interstate markets. In Brisbane, and throughout the northern ports, it was already favorably known, but it was unable to exploit the Sydney markets except in the older type of dump case. It was decided to bring the matter before the New South Wales Government—by deputations, if necessary.

Insurance.—The matter of insurance was debated. Some growers thought that the Association should form its own insurance fund. Year after year growers paid insurance fees, and got little or nothing for it. Mr. H. G. Colombie explained the special provisions of the insurance policy covering the "Opossum" pack, but thought members might insure against certain contingencies, and build up a local fund for others. The matter was referred to the Committee for a special report.

It was decided to allow members considerable freedom in their choice of shipping representatives, and a list of shippers submitted was approved.

The following officers were elected for 1929:—

Chairman: Mr. J. J. Ahern, Pakenham.

Committee: Messrs. R. Nash, Bunyip; J. W. Bailey, Narre Warren; R. H. Bunt, Officer; W. H. Carne, Pakenham Upper; F. Kennedy, Pakenham; with two representatives for Beaconsfield still to be elected.

Secretary and Treasurer: Mr. F. Thomas, Bunyip.

Inspector: Mr. Geo. Grant, Beaconsfield.

Crop Insurance.—Some consideration was given to the means of creating a fund to guarantee members against losses by hail, or mischance during transport, and it is probable that a levy per case will be collected on all fruit which sells above a fixed figure on the overseas market. All members were agreed upon the value to them of such a fund, and the matter was referred to the Committee for report to the next meeting.

Several new members have joined the Association.

ROYAL SHOW EXHIBIT.

One of the most interesting exhibits to fruitgrowers at the recent Melbourne Royal Show was that of the Gerrard Wire Tying Machines Co. Pty. Ltd. During the Show, demonstrations were given on the latest methods of packing Apples and the method of wiring cases with the Gerrard machines. It was interesting to note, also, the display of softwood fruit cases, which have been adopted solely for the export trade by Canada, U.S.A., New Zealand and South Africa. Other lines exhibited were the Adeco Lid Press, which was designed by a New Zealand orchard instructor for lidding the standard fruit case. This lidder is portable and strong, and when in operation it clamps both ends of the case simultaneously, and applies an even pressure to the fruit. An illustration is published elsewhere in this issue. The Truegrade Apple gauge is another line handled by this firm. It is indispensable to the orchardist, packer and picker for checking the sizes of the fruit. It is easy to carry about because it folds into pocket size. This useful article is retailed by the Gerrard Company at 7/6 post free. Further particulars of all these machines are obtainable on application to the Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke-street, West Melbourne, and their offices in the other States.

Fruit Trees.—Many useful hints and general information are given in the illustrated catalogue which is issued post free by C. J. Goodman, nurseryman, of Bairnsdale, Vic. During the many years the firm has been in existence, a large business has been built up, because of the repeat orders which come from clients who appreciate the patient and skilful attention paid to the production of the trees. The present proprietor, Mr. Geo. W. Peart, is a capable and appreciated horticulturist.

Victorian Fruit Marketing Organisation

It was the intention of the Provisional Committee of the V.F.M.A. to circularise all Victorian growers, but, being unable to procure a complete list, the "Fruit World" arranged to publish the following information, at the request of the Committee, in order to bring the objectives of the Association under the notice of as many growers as possible.

YOU have no doubt seen in the papers some reference to this new organisation, and you may have heard something about it from your fellow-growers, but you may not have realised that it concerns you, very much indeed, materially and intimately, because it will have much influence on the future of your industry. Hence our reason for bringing some of its objectives direct to your notice, knowing that you will not fail to become a member when you realise that the V.F.M.A. can do a great deal for you.

What Will the V.F.M.A. Do?

It will promote and protect the general interests of all connected with the growing, exporting, and marketing of fruit.

It will improve the selling conditions on all markets and the methods of transport, handling, etc.

It will open fresh markets and widen the distribution of fruit.

It will by co-ordination and voluntary co-operation arrange special chambers to special ports, also trials of pre-cooled shipments.

It will gather and exchange useful statistical information.

It will endeavor to co-ordinate its shipping programme with those of other States, in order to avoid the shipping of excessive quantities in any one steamer to any one port.

It will keep growers informed of the particular varieties and sizes which are in favor on each market, and discourage the shipment of unsuitable varieties or sizes.

It will look into the problems of the carriage of fruit, and particularly of Pears, which suffered severely last season.

It will take all possible steps to prevent the damage of fruit by rough handling from orchard to purchaser.

It will assist all members in their difficulties as to freight, damage, and all other claims with carrying corporations without any charge to the members beyond the annual contribution decided upon.

It will speak on behalf of growers whenever it is necessary to approach the State and/or Federal authorities in connection with any matter requiring attention.

It will bring into closer association the various branches of the industry.

It will not attempt to interfere with business freedom, nor prevent any grower from shipping through any agent to any receiver he desires, or to any market he chooses.

Who Can Join the V.F.M.A.?

All growers and exporters of deciduous fruits.

How Will the V.F.M.A. be Run?

By an Executive Committee to be elected by the members.

What Voice Will Members Have in the V.F.M.A.?

For the export section it is suggested that each member will have one vote, plus one extra vote for each 100 cases exported in the preceding season, no matter how or where the fruit has been exported, nor whether sold or consigned. Members may attend and vote personally, or through their representatives.

Provision will be made in the constitution for members to call special meetings when desirable.

(Special sections may later be created to deal with local and interstate marketing.)

What is the Annual Subscription?

2/6 per annum, plus, in connection with exports, a small levy per case to be fixed by the members at a general meeting, the levy to be paid equally by growers and exporters.

Can This Organisation Help Growers?

If you have any grievance or think this organisation can help you and be of benefit to you in any way, it is at your disposal, provided you become a member.

Arbitration Panel.

An arbitration panel will be created to settle all matters in dispute.

Participate in Election of Committee and in Drafting Terms of Constitution.

If you join soon, you will be able to vote for the Committee to be elected, and will also be able to take part in the discussion and framing of the constitution of the organisation.

It is unfortunately true that all previous attempts at organising Apple and Pear growers have more or less failed, and not a few maintain it is almost impossible to organise them. The initiators of the V.F.M.A. hold a different opinion, hence the reason for this new movement, which, however, is different from its predecessors inasmuch as this organisation is a combination of interests, and the members themselves will draft their constitution and run the Association through their own elected representatives. Moreover, members will at all times have the power to call special meetings when desired.

Bearing all this in mind, will you hold aloof, and give anyone who sneers at those engaged in our industry the opportunity to say that we cannot act collectively in our own interests? Why not follow the modern trend of affairs and combine to improve the lot of everyone, including your own?

"United we stand, divided we fall."

What will your choice be?

N.B.—Will growers kindly note that the Provisional Committee of the V.F.M.A. will, upon request to the acting Hon. Secretary, A. S. Harrison, be pleased to make arrangements for some of its members to visit any district to explain the objectives of this new movement. It is thought preferable to delay the election of the first Executive Committee, and the finalising of the constitution until all growers have been given an opportunity to join.

General Australasian Representative:

H. G. COLOMBIE

Temple Court, Collins Street, Melbourne

'Phone: F3284.

Telegraphic Address: "Columbine," Melbourne.

Over 20 years' experience in the marketing of fruit Overseas.

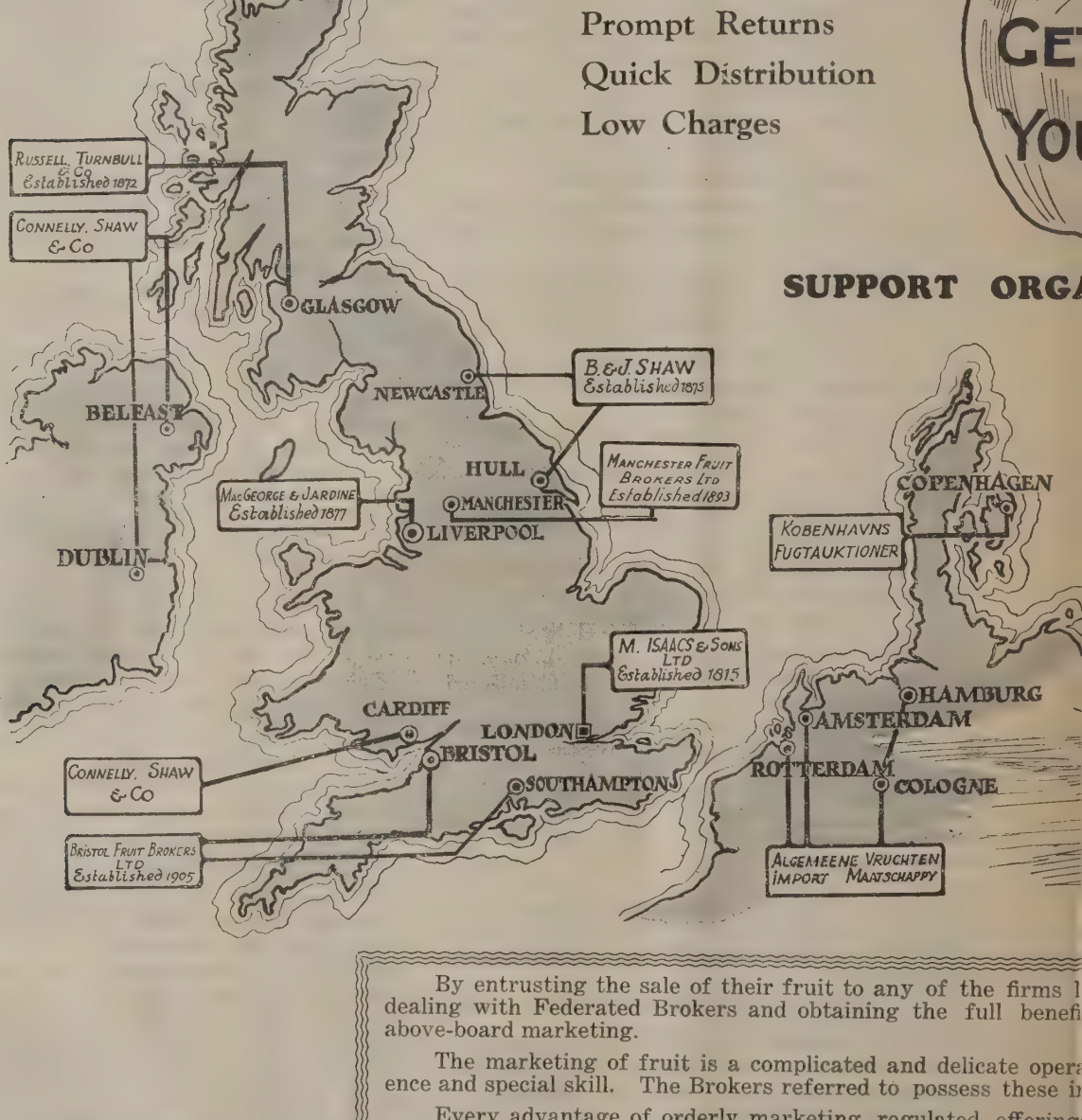
INCREASE Y

The Most Comprehensiv

Prompt Returns
Quick Distribution
Low Charges

GE
YOU

SUPPORT ORGA



By entrusting the sale of their fruit to any of the firms l dealing with Federated Brokers and obtaining the full benefi above-board marketing.

The marketing of fruit is a complicated and delicate opera ence and special skill. The Brokers referred to possess these i

Every advantage of orderly marketing, regulated offering knowledge of what happens to your fruit, is assured to you by tion not built up on paper, but created by generations of solid

UR RETURNS

ING

ganisation in the Fruit Trade

AUSTRALIAN GROWERS!

Profit by the experience of others, and **SUPPORT ORGANISED MARKETING.**

CENTRALISE the sale of your fruit **IN** the **ONE RECOGNISED AUCTION SALEROOM AT EACH PORT,** where Overseas Fruit is concentrated, and where large numbers of buyers attend regularly, ensuring **WIDE DISTRIBUTION.**

This **CONCENTRATION ENABLES BROKERS** to **REGULATE SUPPLIES** and **STABILISE PRICES.**

By this system **BUYERS** are **MADE** to **COMPETE** for the fruit to the **BENEFIT** of **YOUR RESULTS;** whilst by other methods Salesmen compete to obtain buyers.

CATALOGUES are printed for Buyers before sale, and reprinted after sale, **SHOWING ACTUAL PRICES PAID** for your fruit. No manipulation of results possible.

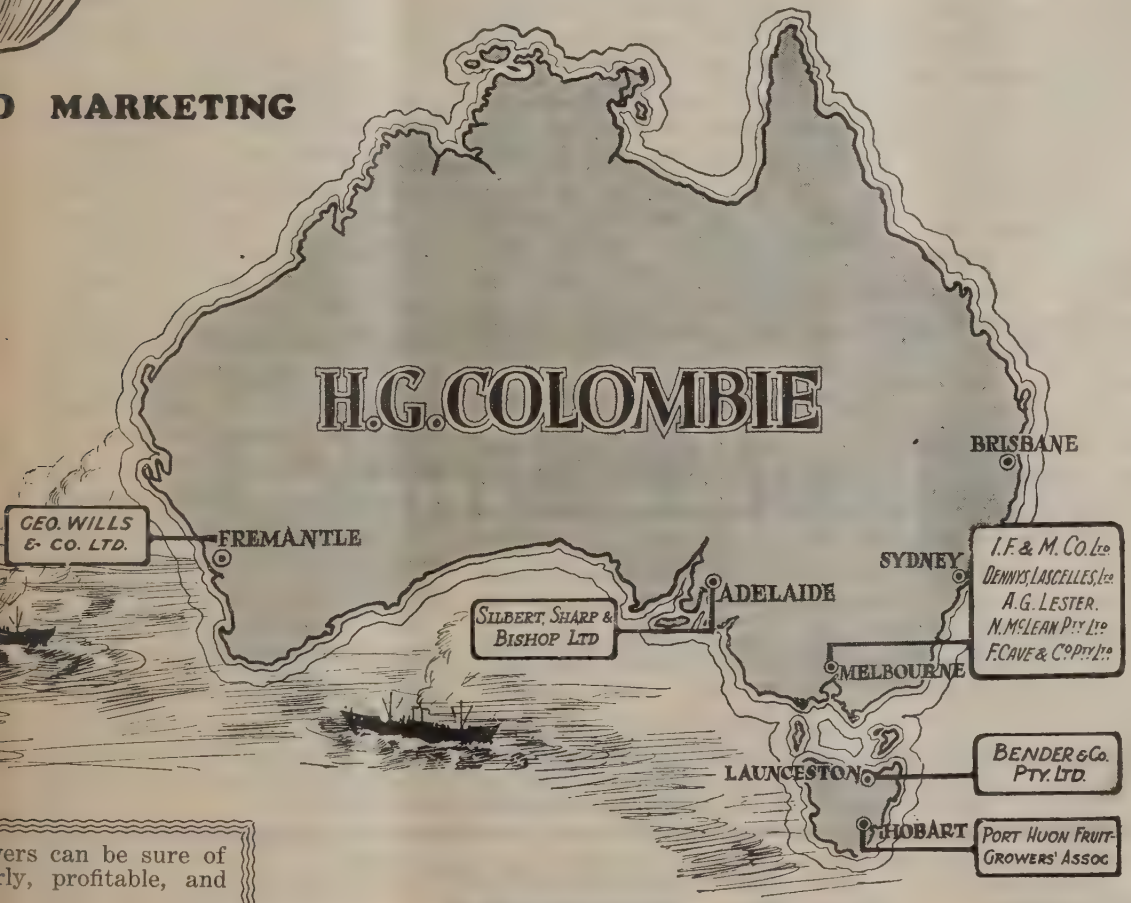
Parcels are sub-divided to enable all buyers to compete on equal footing.

Each parcel is valued by Auctioneer before sale, and lots not realising reserve prices are withdrawn.

ORE
UIT

For shipping space, advances, etc., apply to the Shipping Representatives shown on this map.

D MARKETING



ers can be sure of
rly, profitable, and

g for great experi-

markets, and full
sation; an organisa-
ractical experience.

Queensland

Orchard Notes for November

Costal Districts.

NOVEMBER is somewhat of a slack month for fruit in the coastal districts as the citrus crop is over, excepting for late Valencias and a few Limes and Lemons. The main summer crop of fruit in the principal districts is only in the flowering stage, It is also a slack month for Bananas, as the summer fruit is not yet fully developed. Young suckers should, however, be making vigorous growth, and the plantation will require constant attention to prevent the stools being overcrowded with too many suckers.

Seasonable cultural hints from the Department of Agriculture include the following:—Keep the land well worked and free of weeds. Where there is a danger of the soil washing badly with heavy rain, rows of Mauritius, or other suitable beans should be planted at right angles to the fall of the land. The growth they make will help to hold the soil, and save it from being washed away.

When planting beans, either to prevent washing or for green manuring, don't forget to manure them, and you will get a much bigger yield. A good manure for a bean crop is 1 cwt. sulphate of potash and 4 cwt. of basic super-phosphate, or finely-ground phosphate rock to the acre. If the soil is deficient in lime, a dressing of not less than half a ton to the acre will be found beneficial.

Pineapple plantations require to be kept in a state of thorough tilth, and no weeds must on any account be allowed to grow. If blady grass makes its appearance it must be eradicated immediately, for once it gets established, it will take entire control of the plantation and ruin it.

The planting of Pineapples and Bananas can be continued throughout the month if the land is properly prepared.

Young **Papaw** plants that have been raised in the seed bed can be set, as also can young **Passion Fruit.**

With regard to **citrus**, orchards must be given every attention. The ground must be kept in a state of proper tilth, and regular watering kept up if trees show signs of distress, due to lack of sufficient moisture.

Trees should be examined from time to time in order to note the appearance of pests. When young scale insects of any kind are hatching out, they should be sprayed with a weak emulsion of a miscible oil. Even a weak resin wash or soap and tobacco will kill young scale as they hatch out. Borers of all kinds should be looked for and destroyed wherever found. Water-sprouts, if not already cut away, should be removed.

Vines should be kept in a state of thorough cultivation. Spraying for downy mildew and black spot should be continued if necessary, as well as sulphuring to prevent oidium.

The **fruit fly** must be fought wherever seen, and special care must be taken to destroy infested fruit.

Potatoes and **tomatoes** should be sprayed with a combined spray, consisting of Bordeaux or Burgundy mixture and arsenate of lead. This will prevent blight and kill leaf-eating insects.

Granite Belt, Southern and Central Tablelands.

Keep down all weeds and conserve moisture by cultivation. **Citrus** trees should be irrigated and land kept in perfect tilth. Spraying for codlin moth should be continued. All pip trees should be bandaged, and bandages examined at frequent intervals, and all larvae contained in them destroyed. Neglect to spray thoroughly, and attend to bandages have been responsible for the increase of this pest in the Granite Belt.

Combined action must be taken to combat the ravages of the **fruit fly** should it make its appearance. Careless growers who make no endeavour to keep this pest in check, are a heavy tax on the industry.

Rutherglen bug is a serious pest in this district, and the best remedy is to keep orchards free of weeds. Brown rot should be watched for carefully, and on its first appearance, all ripening fruit should be sprayed with sodium sulphide wash.

OBITUARY.

Death of Mr. Munro Hull.

Queensland Loses a Vigorous Worker.

Mr. G. W. Munro Hull, one of the best-known residents of Eumundi, Queensland, was found dead in his bed at his home on September 24.

Death was due to heart failure. The end was sudden, and came as a great shock to relatives.

The deceased was aged 62 years. He was the eldest son of the late Mr. and Mrs. A. A. Hull, and his birthplace was Hobart.

When a young man, Mr. Hull came to Queensland, and entered the Lands Department, where he occupied a position for many years. In 1903 Mr. Hull took up the land for farming near Mt. Cooroy. Nine years later he came to the Eumundi district, and engaged in dairying, which he later allied with Banana growing. He was a man of great energy and identified himself with public affairs. He was prominent in the formation of the Eumundi Fruitgrowers' Association, and in the early activities of the Southern Queensland Fruitgrowers' Society, and the now defunct Wide Bay District Council. Mr. Hull also conducted many experiments to combat diseases in Bananas.

Fruitgrowers in Queensland remember Mr. Hull by his vigorous articles on organisation, and his undisguised disapproval of the constitution and administration of the Committee of Direction of Fruit Marketing.

About 18 months ago, Mr. Hull, on medical advice, relinquished many activities. He is survived by a widow, one son (Mr. E. Hull), and a daughter (Mrs. F. G. Roberts), all of whom reside in Queensland. A brother (Mr. F. A. Hull, of Eumundi), and sister (Mrs. S. Giles, of New Zealand), also survive.

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

VICTORIA.

Passion Fruit Culture :: "Woodiness" developes under Certain Conditions

Symptoms and Control.

WITH the object of obtaining a winter crop, growers of Passion Fruit sometimes prune their vines in October or November. Where woodiness is observed to be fairly widespread in an older plantation, however, the practice is inadvisable, for while the summer crop will be lost, the subsequent winter crop will contain a high percentage of worthless, woody fruits, states the N.S.W. Department of Agriculture.

The disease of Passion Fruit known as woodiness is most readily recognised in the fruits, by the condition from which the trouble derives its name. The skin or rind of such fruits is abnormally thickened, and often a certain amount of cracking and scaliness of the outer layers may be observed. These fruits can only be cut through with difficulty, and are then observed to contain only a limited supply of pulp of inferior quality. Although the disease is most commonly observed on the mature fruits, symptoms of the disease may be observed in fruits in all stages of development. In severe cases, many of the younger fruits fail to mature and fall from the vines.

Healthy fruits are somewhat ovoid in shape, and on drying slightly become shrivelled in a characteristic manner. Woody fruits are generally stunted and deformed. They are occasionally spherical in shape, and this feature, coupled with the hardness and purplish leaden color of the fruit, has given rise to another common name for the disease, viz., "bullet."

Symptoms on the Foliage.

In addition to these marked symptoms on the fruit, the disease is also characterised by certain abnormalities of the shoots and foliage of the vines. Such vines generally have a stunted and deteriorated appearance. The leaves, particularly of the terminal shoots, are smaller than normal leaves, and frequently are puckered, curled, and twisted. On closer examination it is seen that such leaves do not possess a normal green coloration, but are either pale yellowish-green or have a mottled appearance, due to the presence of light-green and dark-green areas. Secondary symptoms of the disease may be observed on the older mature leaves. Although at first normal in appearance, such leaves may later develop a series of small, pale-yellowish spots, particularly in the areas between the veins. These spots should not be confused with the discolorations caused by the brown spot fungus, Gloeosporium fructigenum.

The disease is most commonly observed during the winter months, although severely diseased vines may be seen throughout the year. Individual vines only may be affected, or the disease may be widespread throughout a plantation. Slightly diseased vines, which have produced a few woody fruits during the winter months, may subsequently produce normal fruits during the summer months, but such vines are not as productive as normal vines.

Although the disease is most apparent on older vines, close examination will often reveal that it is present in young vines, and even in young seedlings, and it is most important that the symptoms of the disease on the leaves and shoots should be fully appreciated in order that control measures should be most effectively applied.

* * *

A Virus Disease.

MANY DIFFERENT THEORIES have been advanced as to the cause of the disease, but it has now been established that it is due to the action of a virus. The virus

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England, the Continent and New Zealand.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

is infectious in character, and is present in the sap of diseased vines. Diseased vines represent sources of infection, and are, therefore, a menace to adjacent healthy vines.

The disease was readily transferred by mechanical means in the infection experiments, and it is very likely that this is the most common method of transmission of the disease under field conditions. Infection may be carried on the hands of those working among the vines when pruning, rubbing off the early shoots, and in tying the vines to the supporting stakes and wires. Insects which feed on diseased vines and then migrate to healthy vines may also be concerned in spreading the disease. Passion vines, however, are not very subject to visitations by insect pests, and this aspect is probably not of great importance under commercial conditions.

Measures Recommended.

1. Seedlings should not be raised in proximity to diseased vines. The seedlings should be closely inspected at frequent intervals, and those showing signs of disease in the leaves should be removed and destroyed. Only healthy seedlings should be planted out.

2. After planting out, the vines should be carefully and systematically inspected at intervals, and again any diseased vines which are observed should be immediately removed and destroyed. Such vines should not be pruned. Replacements may be safely made shortly after removal of the diseased vines. The hands and knives should be well washed in soapy water after dealing with a diseased vine and before working with healthy vines.

3. Older areas of vines should be cut down and destroyed as soon as they become commercially unprofitable. They should not be allowed to remain in a neglected condition, as they are a source of dangerous infection to adjacent young vines.

4. Severely diseased individual vines in older plantations should be first cut off at the ground level and allowed to dry out before removal. This procedure is less likely to cause injury and subsequent infection of the adjacent vines which have become intergrown with the diseased vine on the supporting wires.

5. Remove all weeds and other material which may harbor insects in proximity to the vines. Sprays cannot be applied effectively to Passion vines under commercial conditions, thus it is all the more necessary for other means to be adopted to minimise possible insect infestation.
generated under a cover of calico or canvas, in sufficient quantity to kill the scale, or sprayed with a mixture of miscible oil and water at the necessary strength, and so that the spray comes in contact with every part of the tree.

BRISBANE

F. B. BOLTON & Co.
ALBERT HOUSE,
BRISBANE.

Brokers and Selling Agents for
FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

We sell to wholesale Distributors only, and do not handle growers' consignments.
We act as Railway Freight Agents for growers' joint truck loadings, and secure lowest freight rates.
On Forward Sales of fresh fruit we act for sellers and collect cash in exchange for delivery order.

COVENT GARDEN,
LONDON
Ridley, Houlding
& CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.,
Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

TREE-PULLER WANTED.

A subscriber in Howard, Queensland, asks if anyone in Victoria or elsewhere has a second-hand Trewhella tree-puller (hand power) for sale?

Anyone interested is invited to write to the editor "Fruit World," Box 1944, G.P.O., Melbourne, who will place the parties into touch with each other.

Dusting for Pest Control

Ten Times as Rapid as Spraying.

In a special article contributed to the London "Fruitgrower" by Professor H. H. Whetzel on the dusting of fruit trees to control diseases, the writer, who was for many years connected with the New York State College of Agriculture, states:—

By far the most important question in the profitable production of fruits, such as Apples, Plums and Cherries, is the control of the diseases and parts which afflict these crops.

The disease and pest problems of the fruitgrower are probably most nearly like those of the region with which the writer is familiar. For this

Fruit Shipments
United Kingdom
and the Continent
W. D. PEACOCK
& CO.
24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

TASMANIA
Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.
Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.
Correspondence Invited.
H. JONES & CO. LTD.,
HOBART

MANCHESTER

(40 Miles Inland)

Is the Nearest Deep-water Port to BIRMINGHAM, BRADFORD, COVENTRY, HALIFAX, HUDDERSFIELD, LEEDS, LEICESTER, NOTTINGHAM, SHEFFIELD, STOKE, and over 200 cities and towns in England's greatest industrial area.

The Bulk of Australian Fruit Is Landed in London

yet the population of the North and Midlands is greater by some millions than that of the South of England.

GROWERS AND EXPORTERS PAY THE BILL!

For Handling and Transport Charges and Deterioration of fruit despatched from London to the North for re-sale.

Official records of prices prove

There is no Better Market than MANCHESTER

and the Port, Dock, Sale Room and Forwarding facilities are

SECOND TO NONE.

Ensure Minimum Charges and Maximum Results

By Direct Shipment to Manchester Docks.

Address enquiries as to opportunities for direct trade to:—

W. J. WADE, Representative of the Manchester Ship Canal Company

8 BRIDGE STREET, SYDNEY, N.S.W.

Cables and Telegrams:— **"Portoman," Sydney.**

reason it seems probable that the development of dusting as a substitute for spraying fruit trees, which began in New York State in 1912, will be of special interest. Much of the writer's time and energy during the past ten years have been devoted to the development of fruit dusting through the direction of scientific researches on the problems involved and the stimulation of the practical applications of the methods in the orchards of New York and surrounding sections.

One of the important questions raised on the introduction of dusting has been that of its efficiency as compared with spraying. Much of the experimental work thus far done on dusting has been primarily concerned with this problem. In the New York State Horticultural Society Proceedings for 1920, the writer presented a careful summary of all comparable experiments on orchard dusting reported up to that time from the United States and Canada. In the case of Apples, this included a total of 29 separate experiments made during the previous four years in New York, Michigan, Nova Scotia and Illinois. The average of the untreated plots or checks in all these experiments was: Scab, 56.2 per cent.; codlin moth, 21.4 per cent.; sound Apples, 22.4 per cent. The average for sprayed plots was: Scab, 15.1 per cent.; codlin moth, 5 per cent.; sound fruit, 72.9 per cent. The dusted plots averaged: Scab, 14.7 per cent.; codlin moth, 3.8 per cent.; sound fruit, 74.7 per cent. Every fruit showing the slightest trace of scab or worm injury was counted imperfect. The dust gave on the average slightly better results. It is safe to say that in the fruit sections of New York to-day 50 per cent. or more of the fruitgrowers having 50 acres or more are dusting. Many growers with smaller acreages also dust. The dusting of Peaches with sulphur for the control of brown rot has virtually replaced spraying in most of the important Peach sections of Eastern United States from the Great Lakes to the Gulf of Mexico. The blossom blight and fruit rot of Cherries and Plum, as well as the leaf spot diseases of these fruits, are also effectively controlled by dusting.

Dusting is rapidly replacing spraying in most of the fruit sections of Eastern United States and Canada. Were growers who dust getting less effective control of their fruit diseases and pests than those who spray, this would not be the case.

The efficiency of dusting having been established, the next problem to present itself is the cost of this method as against that of spraying.

"To choose the Best is Wisdom"

When You Buy a

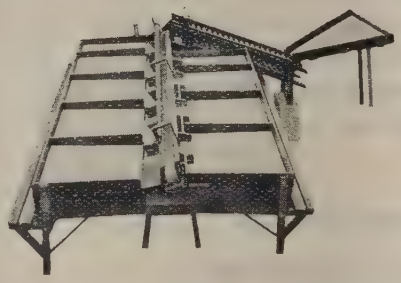
"LIGHTNING" FRUIT GRADER

YOU BUY FOR ALL TIME

The "Lightning" will still be an asset when regulations for marketing fruit are much more stringent than they are at present.

Fitted with the "Lightning" Patented Rubber Roller—the secret of successful sizing.

Equally successful for every class of fruit—Oranges, Lemons, Mandarins, Peaches, Apricots, Plums, Apples, Pears, Tomatoes, etc.



Model 10, with the Elevator Conveyor attached. Spring floor bins on each side of the Machines. Each bin will hold up to 3 bushel cases of Fruit.

The one machine efficiently sizes the lot

WITHOUT DAMAGE.

In addition to Sizers, we manufacture complete Processing Equipment for Packing Houses, Gravity Conveyors, Lidding Press, Clamp Trucks, etc.

THE "LIGHTNING" FRUIT GRADER CO.

5 Hoddle Street, Collingwood, N.9, Melbourne, Vic.

Cable and Tele. Address: "Lightning," Melbourne.

A dusting machine is substantially cheaper than a spraying outfit of equivalent grade. Depreciation is much less, since with equal care an orchard duster will far outlast a spray outfit. The simplicity of the duster with so few parts to wear out, no troublesome valves and bursting hose to contend with, makes the cost of upkeep insignificant in comparison with that of a high-power orchard sprayer.

Then there is the cost of application to be taken into account. Orchard dusting is from six to ten times as rapid as orchard spraying.

Dusting is certainly far more convenient. There is no laborious handling and hauling of water, with its consequent delays and difficulties. The necessary quantity of dust for the day's operation can be taken at one load to the orchard. Filling the hopper is the work of but a moment. The duster is light and gives no trouble on the soft ground, wet with spring rains.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE," 499 LITTLE COLLINS ST MELBOURNE.

There are three classes of pests to be combated in the orchard—fungi, chewing insects and sucking insects. Effective dusts for use against each of these are available. For all fungus pathogens of Apples, Peaches, Plums, and Cherries, where a protectant is required, sulphur dusts are to be preferred in general. Sulphur gives a polish to Apples which is never to be obtained with copper fungicides; it is rarely or never injurious to fruit or foliage. The finer the sulphur dust, the more toxic it is to the fungus, and hence the less required per application. There has recently been developed in America a colloidal sulphur dust of extraordinary fineness. It has been proved to be 300 times as toxic to spores of sulphur-sensitive fungi as is the finest ground (300 mesh) dusting sulphur. It is sold mixed with finely ground sulphur as a carrier, under the name of Kolodust. It also possesses superior adhesive qualities. Its invention is, in the writer's opinion, the greatest discovery in fungicides since that of Bordeaux mixture.

Copper dusts are dangerous to the foliage of Peaches, some Plums, and sweet Cherries, and not infrequently to Apple foliage also. It is safe and effective on sour Cherries and Grapes. Sulphur is much more effective for powdery mildews than is copper, and has been proved to be more effective against Apple scab.

For the chewing insects, such as codlin moth and leaf-eaters, the standard poison is lead arsenate. It is usually applied mixed in with the sulphur or copper lime dust or diluted with hydrated lime.

For most soft-bodied sucking insects, such as aphids and young leaf hoppers, 3 per cent. nicotine dust (7½ per cent. of nicotine sulphate impregnated in hydrated lime) applied during the afternoon or evening of a hot day is very effective. For scale insects, soda sulphur (soluble sulphur) dust applied to the dormant trees in the spring is apparently effective. It must be used with discretion on Peach trees, and never in autumn, as it may kill the back twigs. If properly diluted and applied, it will control Peach leaf curl, and may be used on Apples as late as the green leaf tip stage (delayed dormant), where it is effective against Apple scab, and is held by some to kill young aphids at this time. The finest sulphur dusts are held to be effective against red spider if applied during the heat of the day.

Australian Dried Fruit Industry.

Will California Dump Sultanas into Australia. ?

Growers Conferences ∴ News and Notes.

A.D.F.A. CONFERENCE.

Important Decisions.

AT the annual A.D.F.A. Conference, the following resolution was adopted: "That in view of the necessity for the more economical, efficient and effective inspection of packing operations, this conference recommends to the various dried fruits boards that the regulations under which packing licences are issued be reviewed along the lines of a limitation of the period and dates during which packers may operate, the boards to have full power to determine the periods during which packing may be carried out."

The report of the Board of Management was presented by the Chairman (Mr. H. D. Howie). It revealed a substantial increase in membership, and urged that stability was undoubtedly dependent upon the efficient functioning of the Association, supported by State and Federal control measures.

The report was adopted without discussion.

After discussing the position in N.S.W., it was resolved: "That this conference regrets the circumstances which necessitated the withdrawal of the export proportions on the 1928 dried fruits declared by the N.S.W. board, thereby breaking down the principle of compulsory export, which is essential to the stability of the dried fruits industry, and urges that all 1928 dried sultanas marketed through A.D.F.A. channels bear the export proportion as declared and withdrawn by the N.S.W. board, viz., 25 per cent.; and that Currants and Lexias bear the export proportion as declared for other States."

The Conference also adopted a further resolution, urging the N.S.W. Government to pass amendments to the State Dried Fruits Act to enable it to become operative, so that stability may be assured to the dried fruits industry in that State and throughout the Commonwealth.

The Conference unanimously carried a resolution to substitute for the present "Sunraysed" brand a suitable design in which the map of Australia was incorporated.

A keen discussion followed a motion that all A.D.F.A. agents render final account sales, so that a grower may know the actual average realisation on each grade of fruit, per ton. It was pointed out that the present system of payments was causing some growers to produce two-crown fruits, because they considered that it was not worth while to go for a higher grade at only a difference of five per cent. in the price.

Mr. H. D. Howie and other speakers explained that five per cent. was not the fixed difference, and it would probably be much greater in future. **The industry's main hope of selling its pack lay in keeping its quality above the lower grade fruit of other countries.**

Mr. Howie suggested that packers should make their first payment on higher grades about £5 per ton higher than on two-crown, as an inducement to growers to improve their quality.

The motion was carried.

Another resolution was: "That this Conference recommends that the Export Control Board should carry out its policy of the pro rata rationing shipments for 1929."

A special committee of the Conference was appointed to investigate the collection of the head office levy on distillery fruit.

TREES That Triumph

The percentage of results from Goodman Trees under all climatic conditions proves their excellence. Every tree that leaves our Nurseries is perfectly clean, healthy, and free from insect pests.

Careful Packing of Goodman Trees

is another feature that contributes to the all-round satisfaction obtained by our customers. Get your copy of our

FREE CATALOGUE

Many useful hints and general information are given, together with details of the varieties available.

Write Now. Advice Gladly Given.

C. J. GOODMAN

Picnic Point Nurseries,

BAIRNSDALE. P.O. Box 47, Vic.

(W. McF.)

FOR BETTER FRUIT Use

Paterson's Concentrated

"CLENSEL"

Insecticide and Fungicide

at every stage of Growth

NON-POISONOUS
NON-INJURIOUS
NON-INFLAMMABLE

Literature on Application
A Trial Solicited with Confidence

CLENSEL PTY. LTD. 184-6 QUEEN ST., MELBOURNE, C.1.

Central 2654

DORADILLO GROWERS.

At the annual meeting of the Merbein Doradillo Association, the following officials were elected:—President, Mr. W. H. Tickell; Vice-President, Mr. G. L. Hardie; Secretary and Treasurer, Mr. E. J. Casey; Committee, Messrs. W. H. Tickell, G. L. Hardie, E. J. Casey, J. Murphy, J. C. Thompson, D. W. Wishart, F. A. Deacon, and G. J. Hyndman.

HAMBURG
(GERMANY).
Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

F. W. Vear
Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
MELBOURNE, VIC.
Highest Market Rates Assured
Prompt Settlements

South African exports of dried fruit during the first four months of 1928 totalled 3,650,860lb., as compared with 2,673,500lb. during the first four months of 1927. Exports of dried Apricots declined from 1,407,600lb. to 1,260,585lb., but shipments of Sultanas increased from 610,900lb. to 1,365,925lb., and of Raisins from 574,750lb. to 845,150lb.

Use Raisins in Apple sauce to improve its flavour and to save sugar.

AUSTRALIAN DRIED FRUITS.

Californian Dumping Feared.

Total Prohibition of Imports or Higher Duties Sought.

The position of the Australian dried fruits industry was recently placed before the Prime Minister (Mr. Bruce), and referred to the Tariff Board.

The case came before the Tariff Board during October, when the following evidence was submitted:—

James Miller Balfour, Chairman of the Victorian Dried Fruits Board, applying for the imposition of a dumping duty upon dried fruits imported from the United States, gave figures of Australian production and Victoria's proportion, together with export statistics, as follows:—

	Tons.
1927 Australian crop dried vine fruits	55,201
Annual consumption in Australia	12,000
1927 exports	41,356
1927 production in Victoria	40,579
1928 Australian production (reduced by frost visitation)	32,032
1928 Victorian production	23,670

This year's production, said witness, was made up as follows:—

Currants	3,502 tons
Sultanas	16,333 tons
Lexias	3,835 tons

The percentages of the above which Victoria was required to export overseas were approximately:—

	1927. Per cent.	1928. Per cent.
Currants	75	55
Sultanas	85	75
Lexias	68	63

Of this season's fruit, Victoria had exported up to October 6 the following percentages of the pack:—

Currants	50.1 per cent.
Sultanas	50.6 per cent.
Lexias	41.1 per cent.

From present indications, the 1929 crop would exceed that of 1927. Several shipments of Californian Sultanas, totalling 20 tons, had recently been imported, and further shipments were expected. The invoice price per ton was 27/10/-, c.i.f., and Customs duty was 3d. per lb., or £28 a ton. The duty-paid-delivered price in Sydney was £57/1/6 a ton. The price at which comparable Australian Sultanas were sold was £73/6/8 a ton, or 1/¾d. per lb. higher than the present duty-paid price of the Californian fruit. To equalise these prices by tariff protection, a duty of 4¾d. would be necessary, and though this seemed high, the benefit of protection was at present nullified through the extremely low selling prices in America, which were said to be £6 to £9 a ton on the grower's block.

Herbert Douglas Howie, Chairman, Board of Management, Australian Dried Fruits' Association, said the present competition from California was unfair, as the fruit was being sold below the cost of production in either country, and the Australian growers were entitled to complete protection against conditions which were the result of a price war in America.

Established 1896.
Cooksley & Co.
Fruit Agents.
Fruit Exchange, Brisbane
Consign to the Agents with years of experience, who guarantee Fruitgrowers the best of Attention and Satisfaction.
Selected Tasmanian and Victorian Representatives.
Reference: Commercial Banking Coy., of Sydney,
Bank of Victoria.
Shipping and Railing, No. 29.

GENUINE
"Black Leaf 40"
IN
10lb. & 2lb. tins
DISTRIBUTORS
The PRODUCERS' DISTRIBUTING Society Limited.
SYDNEY and MELBOURNE

In reply to questions, witness said that wages in California were about the same as in Australia, though hours were longer, and piece work was allowed. There was no pay for holidays, and water was cheaper to the growers.

Peter Malloch, Irymple, gave evidence on behalf of the A.D.F.A., on the costs of production and the extent of the industry in Australia. Taking an average annual turnover of dried fruits as 50,000 tons, at a distributing value of £50 a ton, the value of the crop might be stated at £2,500,000. Growers who had just passed through a season when the yield was seriously

affected by frosts, asked the question, "Why should the Californian growers, who have been brought to a state of insolvency by a packers' war, drag us down to insolvency with them?" Witness contended that in the older areas growers were receiving considerably below cost of production, and had grave reason for concern in view of the existing importations from California.

Douglas Charles Winterbottom, general manager, Mildura Co-operative Fruit Co. Ltd., said the industry was not seeking protection from Californian imports in order to raise prices, and in its application to the

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

Prime Minister had given an undertaking to that effect. They would prefer the total prohibition of Californian fruit in the same way as America prohibited the entry of Australian fruit, and, failing total prohibition, they asked that the tariff be increased.

The inquiry was adjourned to Sydney.

DRIED FRUITS IN U.S.A.

The Californian Situation.

"Distorted in Australia."

The position of the Californian dried fruits industry is stated to have been recently distorted in Australia, according to a cable received by the American Trade Commissioner.

Recently there were large headlines in several Australian newspapers regarding actual or projected dumping of Californian dried vine fruits into Australia.

The American Trade Commissioner in Melbourne advises that the following cable was forwarded by an official (Mr. Brady) of the Californian Dried Fruits Association, and concurred in by Mr. H. M. Creech, Vice-President of the Sun-maid Corporation (Delaware), to the United States Department of Commerce, and transmitted by cable to the office of the American Trade Commissioner in Melbourne:—

"Raisin crop showing up twenty-five to thirty per cent. less than original estimates, tendency of market upward, and expected to strengthen; Sun-maid's position is such that any dumping is highly improbable, if not impossible; reports in Australia regarding likelihood dumping Californian Raisins in that market distort actual California conditions."

At the present time the Californian Sun-Maid organisation is affiliated with the Californian Dried Fruit Association and operating as a commercial factory.

PEAR PEELING AND CORING.

A New Device.

A new method for peeling and halving and coring Pears has been invented, and the process has attracted attention.

Instead of peeling the Pears by hand labor, the work is done automatically: the fruit passes on a conveyor through a bath of patented liquid, thus loosening the skins. The second stage is the passing of the fruit under jets of water, when the skin is entirely and cleanly removed: the waste in peeling, which amounts to as much as 30 per cent., is thus eliminated.

Next the peeled Pears are fed into a machine which automatically cuts the Pears in half and neatly removes the cores.

The inventors state that with one peeling machine and 12 splitting and coring machines, it is estimated 2,000 bushels of Pears can be treated per day at a cost of £16/8/-, as compared with £83/6/8 for doing the same work by hand. In addition, waste is reduced to a minimum: and Pears of 1⅞in. diameter can be used instead of the present minimum of 2¼in.

Other advantages of the new system are enumerated. The machines are on view at the premises of Geo. Mayhew, 193-195 Victoria-parade, Collingwood, Melbourne.

ASSISTANCE TO FRUITGROWERS.

Government Grant for Metropolitan Growers.

In order to encourage the Metropolitan Fruitgrowers' Association in

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

"YARRA"
BRAND
SPRAYS
PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street / 155 Yarra Street } Abbotsford, Vic.
Tasmanian Agents—
M. L. HOPKINS, HOBART

opening new markets for the disposal of fruit, particularly kerb markets in the suburbs of Melbourne, the Victorian Government has agreed to grant £200, provided the growers raise £125.

The foregoing was reported at a recent executive meeting of the Metropolitan Fruitgrowers' Association.

The Minister for Agriculture has been thanked, also Mr. W. H. Everard, M.L.A., for his valued assistance.

New South Wales

News and Notes ∴ Cultural Hints

PRUNE GROWERS MEET.

Higher Duty Sought.

At a meeting of the Prune-growers' Association in Sydney, a letter was read from the Commonwealth Government in reference to a proposal that the import duty on Prunes be raised to sixpence per pound.

The letter stated that inquiry was being made in relation to the matter.

The proposed grading regulations which have been under consideration by the Association previously were dealt with. It was decided to recommend to the Government the gazettal of the grading regulations at once provided, however, that they did not take effect until January 1, 1929. The regulations provide for eight grades of Prunes, namely, 20/30, 30/40, 40/50, 50/60, 60/70, 70/80, 80/90, and "small." The fruit in each grade to be of uniformly good dark color. All packages must contain one grade only, and must be marked by description of the grade and the variety.

There was a long discussion as to the Association's attitude in regard to the constitution of a marketing board under the Marketing Act.

After discussion, during which every member spoke, it was decided to prepare a petition in order that a poll might be taken to decide for or against the creation of a marketing board.

CHERRY SLUG.

Compulsory Spraying.

At a meeting of the board of the Fruitgrowers' Federation of New South Wales in Sydney recently, a request was received from the Armidale Fruitgrowers' Association that steps be taken to have spraying for control of the Cherry slug made compulsory, but the board decided not to do so, as it was thought that growers could deal with the pest themselves.

This view is supported by the experts of the Department of Agriculture, who say the slug is the larval stage of a small wasp, known to science as "Caliroa Limacina."

Method of Control.

The best known method of control is by spraying with arsenate of lead of a strength of 1lb. to 40 gallons of water. This poison, however, should not be applied when the Cherries are ripe or ripening. Most Cherry-growers in the Orange district adopt the safe practice of spraying when the crop is off the trees, thus catching the second brood.

A good practice, however, is to spray as soon as the first slug appears (provided that the fruit is not ripening), and if live slugs can be seen afterwards, to spray again.

The spray gives quicker results if nicotine sulphate be added in the usual proportions, this making the spray doubly sure—by contact and as a toxic dose.

CODLIN MOTH.

Danger of Neglect.

As the codlin moth is one of the worst pests Apple and Pear growers have to contend with, control measures should be systematic and vigorous.

A thorough inspection should be made of bandages, used cases, and packing houses, and any grubs discovered immediately destroyed. Loose bark should be removed, and the butt of the tree at ground level inspected. No place likely to shelter grubs should be overlooked, because this season's infestation is the carry-over of last season's grubs. Bandages should be inspected at least every fourteen days.

The season during which the spray for codlin moth can be applied effectively is short, and if the area to be covered is large, it means that the

Fruit and Ornamental Trees

Grown for Sale by

C. A. Nobelius & Sons Pty. Ltd.

Gembrook Nurseries,
EMERALD, VICTORIA

Telephone: Box Hill 154 Catalogue on Application

Inspection Invited

M. ASVARISCH

FRUIT BROKER

Copenhagen - Denmark

Consignments Received. Jorks Passage.

Telegraphic Address: Asvarisch, Copenhagen.

Inquiries for Victoria and South Australia.

to

J. B. MILLS & CO.

Bank House - Bank Place - Melbourne

work must be faced with resolution, no matter how long the hours of labor may be extended.

It never pays to grow weary in the work of combating this pest. Precautionary measures is the slogan.

FRUITGROWERS' CO-OPERATION.

£5,000 Distributed.

Cheques totalling £5,000 were distributed to shareholders as a rebate in connection with the bulk loading and carting transactions during the last fruit season, at a special meeting of shareholders of the Orange (N.S.W.) Producers' Co-operative Society last month. More than 200 growers were present. The President (Mr. A. Tonking) reported sales for past half-year amounted to £12,889, which was £8,000 more than for the corresponding period last year. In all, 7,382 tons of fruit and vegetables were dispatched to Sydney, with a net profit of £5,465. The fruit showed a profit of 29.13 per cent., and vegetables 52.23 per cent.

The President said the board was about to erect cool stores with a capacity of 11,000 cases, with ample provision for additional storage. Already 10,000 £1 shares had been applied for.

MORE PASSION FRUIT.

The cultivation of Passion Fruit on a large scale is to be started shortly at Coff's Harbor (N.S.W.). It is intended to erect a pulping plant to deal with the fruit, which grows remarkably well in this district.

WESTERN AUSTRALIA.

November Work.

(By G. W. Wickens.)

Continue to keep a sharp look-out for traces of codlin moth, and notify the Department of Agriculture at once if any suspicious tunnellings are noticed in Apples and Pears. Keep baiting and trapping to control the fruit fly pest, and destroy fruit found to be infested.

The Pear slug will probably make its appearance at the end of this month. Spray with arsenate of lead, using 1¼lb. arsenate of lead powder in 50 gallons of water.

Continue cultivation, and thin out fruit on all trees which have set heavy crops.

W.A. FRUIT CROP PROSPECTS.

The Apple crop prospects are excellent. Last year the crops were destroyed by thrips; the trees thus had a rest, and this year the crops promise to be very good.

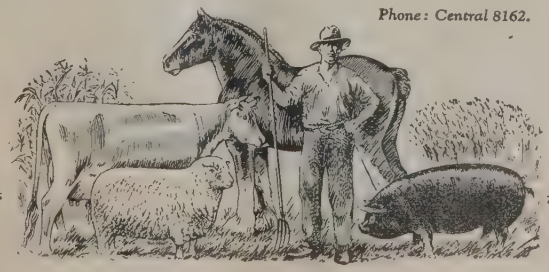
Already arrangements are in hand for the export trade. With the light crops elsewhere in the Commonwealth, Western Australia should reap a golden harvest this season.

AGRICULTURE—
Our Greatest Industry

On the fruitfulness of her Soils does Australia's prosperity depend, for Agriculture is Australia's greatest industry. Naturally the Australian primary producer shows his appreciation of any influence that can be proved to increase the quantity and improve the quality of his crops. He is continually on the lookout for something that means *Greater Profit per Acre.* The use of SULPHATE OF AMMONIA .... Australia's chief Nitrogenous Fertiliser .... has developed so greatly because experience has shown its *Money* value when used either alone as a seasonal top-dressing on fruit and vegetable crops, or applied in mixtures containing superphosphate and potash. There are now few branches of Australian agriculture which do not enjoy the benefits of SULPHATE OF AMMONIA.

Literature from
THE METROPOLITAN GAS COMPANY,
196 Flinders Street, Melbourne.

Phone: Central 8162.



SA 11/28

Laborious Cherry Facing

reduced to a minimum
by the use of the

"Pacemaker" Mask

Facing four cases easier than facing one, and the whole "get up" of the fruit much more attractive. The patentees designed the "mask" for their own use, but cherry growers have been so keen about it that it is being distributed Commercially.

Excellent for gooseberries and other small fruits.

Virginia Hygienic Orchard Coy.

P.O. Box 5. Young, N.S.W

Fighting Insect Pests in the Orchard.

Red Spider and Bryobia Mite.

These pests will soon be numerous on Apple and other leaves of fruit trees. They are usually found on the underside of the leaves. The red spider constructs a web. When the pests are in large numbers, they cause the leaves to turn yellow.

Thoroughly spray the underside of the leaves with nicotine sulphate or black-leaf 40.

Looper Caterpillars.

The small brown looper caterpillars are very numerous at present, and if spraying is not carried out they will cause considerable damage to the young Apples and other fruits. Fortunately, they are easily controlled by arsenate of lead sprays.

Light-brown Apple Moth.

The active green caterpillars of this moth are more numerous this season than for several years past. They are particularly destructive to young Apples. Late in the season, Yates Apples are attacked by them. Control same as for looper caterpillars.

Codlin Moth.

Growers should write to the Department of Agriculture for a copy of the bulletin on Codlin Moth and treatment of same, by C. French, Jun., and G. T. Levick. This bulletin is obtainable free of cost.

See "The Fruit World," October 1, 1928, p. 415.

Apple Root Borer.

Woolly Aphis.

Pear Slug.

See "The Fruit World," October 1, 1928, p. 415.

Peach Aphis.

These insects are exceedingly plentiful this season. Continue spraying with black-leaf 40 or nicotine sulphate.

Pear Leaf Blister Mite.

Pear leaves are so affected as to produce reddish or dark-brown spots, which become darker with age, and may spread so as to entirely cover and destroy the foliage. The mites pass the winter on the trees under the bud scales, and begin to work upon the leaves as they appear in the spring. The eggs are deposited in holes bored into the underside of the leaves. The work of the young after hatching cause the galls or swellings. They attack Pear and Apple.

Spray with "Volck" 1 in 40, or any other of the spraying oils.

Scale Insects.

Young scale insects are now hatching. Spray at once with nicotine sulphate, black-leaf 40, or "Volck" 1 in 40.

Peach Aphids.

Thrips.

See "The Fruit World," October 1, 1928, p. 415.

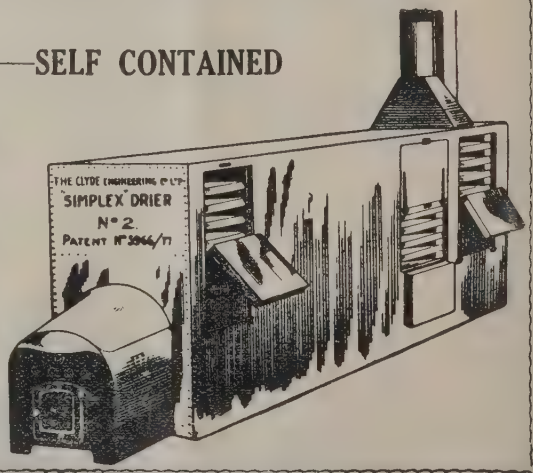
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ltd.
GRANVILLE, N.S.W.

Timm & Gerstenkorn

Fruit Auctioneers and Brokers

Fruchthof . HAMBURG . Germany

Established 1885

Tel.-Addr.: „Timmkorn Hamburg"

Special Catalogues showing prices issued after each sale

Account sales and cheques sent promptly after sale if desired cable remittance

Phone : F 4869

Vic. Rep. Consignments solicited * Advances if desired

BARKER, GREEN & PARKE PTY. LTD., 533 Collins St., Melb.

-LEMONS-

We are the largest Buyers in Australasia

C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vc.

Ship Your Oranges, Lemons, Grapes to New Zealand

All consignments for this market will have careful attention and realize highest prices if sent to

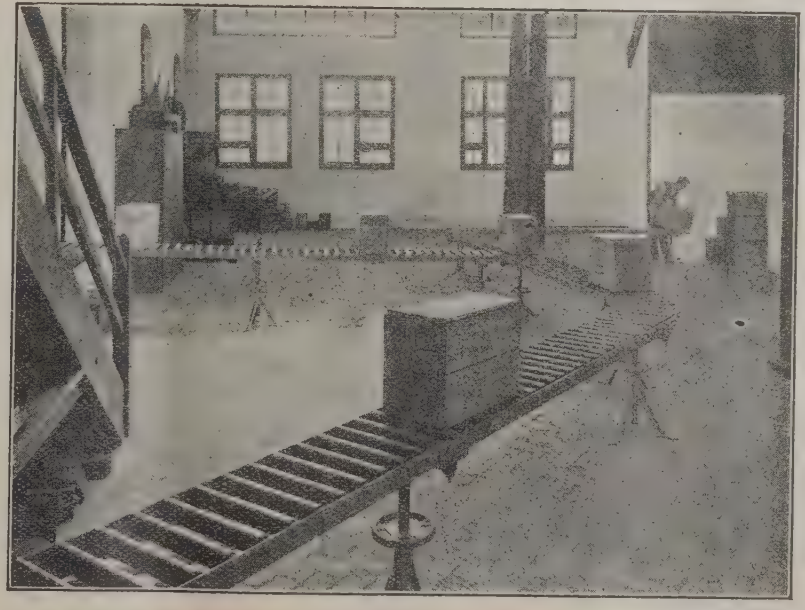
The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable "Peachbloom," Dunedin.

FRUIT GROWERS



COOL STORES

Our Gravity Ball Bearing Roller Conveyer will solve your handling and conveying problems by carrying your cases wherever you desire. **No Power Required**

Substantial Construction - Long Life - Easily Transported - First Cost is Only Cost

Made in Australia by SCHUMACHER MILL FURNISHING WORKS PTY. LTD., Port Melbourne Victoria

Community Irrigation

Dangers of Over-Watering.

Murray Valley Practices Considered.

(By A. V. Lyon, M.Ag.Sc., Officer in Charge Commonwealth Research Station, Merbein, Vic.

AT the Commonwealth Research Station, Merbein, Vic., many interesting tests have been carried out. On the subject of community irrigation, the officer in charge, Mr. A. V. Lyon, M.Ag.Sc., writes as follows:—

There has in recent years, been a revival of interest in the subject of irrigation. This has arisen partly through the influx of new settlers, and, more recently, by recurring dry seasons, during which the systems adopted in normal years have been found wanting in some of the Murray Valley settlements.

The problem should be considered from two distinct angles:—

(1) The season at which water is made available, considered in relation to the particular plants grown, and also the soil type.

(2) The irrigation practice of the individual.

Season of Application.

This problem has recently been discussed, and the periods adopted for furrow irrigation have proved satisfactory in the community settlements of Mildura, Red Cliffs and Merbein during the past two years. As both of these have been seasons of abnormally low rainfall, it may be assumed that under the present system, with standard tillage practice, water is supplied with sufficient frequency to provide satisfactory growth.

The periods are fixed with the object of maintaining an adequacy of soil-water, and do not necessarily bear any direct relation to soil-water requirements at critical periods of growth and seasonal development. This latter problem remains untouched, and it is quite evident that patient research is necessary to fully explore its possibilities.

Two fundamental difficulties

in community irrigation are evident. The majority of community settlements contain many soil types, with corresponding varying water requirements, and, in any one community irrigation, individual irrigations must be separated by periods of three or four weeks. Both these circumstances tend to one result—the application of water to certain soil types, and individual holdings before it is necessary in order to maintain adequate soil moisture until further irrigation is due. Notwithstanding these fundamental difficulties, it is possible to make present practices more efficient and more economical.

Throughout the history of Australian irrigation settlements, there has been a very general agreement that

excessive irrigation

has been practised. Two directions in which savings could, with advantage, be instituted under the present systems are discussed below:—

MARGETSON
& CO. LTD.

Fruit Importers & Salesmen

30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL

Head Office—Covent Garden Market, London, W.C.

Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.

Shipping Nos.
431 and 432

(a) Omission of all unnecessary irrigations.

(b) Application of adequate, not excessive, amounts of water at each irrigation.

In regard to (a) the winter or spring irrigations are the only ones that may be safely omitted. This course is adopted when heavy rains have fallen; otherwise it is warranted only in special circumstances.

Two cases may be cited. Sandy soils, after autumn irrigation and winter rains, may contain sufficient moisture to maintain growth until the early spring irrigation is due. This has been frequently demonstrated, and additional examples have been provided in the Mildura district this year.

Similarly, sandy soils or sandy loams irrigated in August, will have an adequate soil moisture content for vine growth until December.

As a result, irrigators on these soil types, who irrigate early in the late spring period, can, with advantage, miss the early spring irrigation.

This practice has been followed at the Research Station on two previous occasions, and will again be followed this season. The period between irrigations (August 10 to November 24 approximately), is thus 15 weeks. It must be remembered, however, that

the vines were dormant

for the first four weeks of this period, and carry very little foliage for much of the remaining time. One can confidently say that, with the exception of salty and clay soils, soil-water shortages have never been experienced on well worked land in the Mildura district prior to the end of November, provided that the winter or early spring irrigation has been taken.

Furrow System.

It is undoubted that over-irrigation is practised by the majority of irrigators. Apart from the question of economy, this is a grave fault.

The most fruitful source of irrigation troubles arises from free water in the subsoil. Once soil has been wetted above a certain point, additional water is harmful. In addition, by adding to the free water, and thereby interfering with soil aeration, the vulnerable feeding roots of the vines may be checked, or even destroyed. The extent of damage is proportionate to the period of overwetting, that is, the time during which the soil moisture content is in excess of the field capacity.

Recent measurements and examinations at Merbein and Red Cliffs have demonstrated that on the majority of our soil types,

a 12-hour irrigation

should not be exceeded. It is recognised, of course, that this period is practicable only at the end of the furrow, and that over-irrigation at the upper portion is inevitable.

On a loam soil at Red Cliffs, after

AGENTS WANTED
To Influence Consignments of Apples by Reliable Firm
Write, Stating Terms, Etc., to—
HARTSTOKE, FRUITERERS LTD.,
Brentford Market, Middlesex.
Code: A.B.C., Fifth Edition.
Cables: "Hartstoke, Brentford, Middlesex."

12-hours, 90 per cent. of the added water went beyond the reach of the plant roots. During this period (12th to 24th hour) horizontal spread increased only 1 ft. (from 6 ft. to 7 ft.) at a depth of 3 ft. In 24 hours the water had reached, and was making addition to free water, found at a depth of 8 ft.

In these circumstances, one can only predict disaster if over-irrigation continues.

The frequency of irrigation is such that wetting to a depth of 3 ft. or 4 ft. will suffice between irrigations. All measurements taken so far indicate that, for at least three-quarters of the furrow, the water should run down as quickly as is consistent with the soil type and grade. Washing away of soil must necessarily be avoided, and on very flat tracts quick irrigation is often impossible.

A study of soil-water profiles from an irrigation furrow indicates that, on the lower portion of vine rows, at least three or four, rather than two, furrows are more efficient.

Despite the importance of irrigation, improvements in methods are not advancing at a rate commensurable with other horticultural and viticultural practices. The fact that the wetting of the soil to a depth of three feet, without accumulations of free subsoil water, constitutes efficient and economical irrigation, should be recognised, and methods modified accordingly. The reservation is made that these facts apply only to well-worked soils.

In conclusion, it is pointed out that there is obviously no justification for the statements frequently made that the omission of an irrigation, or a light irrigation, is not a saving for the individual. As the individual charges are based on the community cost, the fallacy of the statement is apparent. More frequent irrigations have been available in recent years, and an increase in the water rating is inevitable, if abuse of the privilege continues.

Fruit Trees.—Messrs. John Brunning and Sons, fruit tree nurserymen, of Somerville, Victoria, direct attention to their full stocks for 1929 planting, and state that their trees are grown on virgin soil only: each year a fresh block is planted. The business was established in 1866.

A VISIT TO JAPAN.

Readers who have been looking for an opportunity of visiting under ideal conditions the charming and attractive land of Japan are directed to the 10 weeks' wonderful tour through Japan, which is being conducted by Burns, Philp and Co. Ltd., world tour and travel organisers.

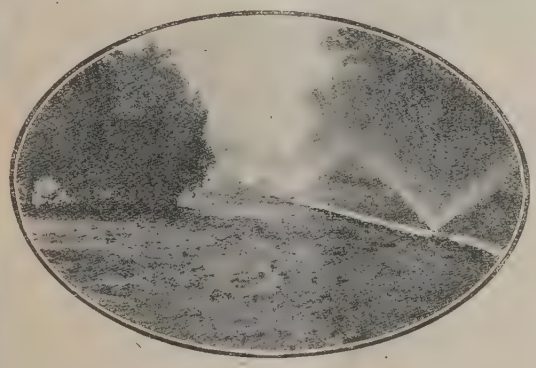
The route of this tour is via Brisbane, Queensland ports, Torres Straits, the Philippine Islands, Manila and Hong-Kong, and includes 16 days' escorted tour in Japan.

The steamer which will carry the passengers is the "Aki Maru," which has all conveniences for passengers, including deck cabins. A swimming pool will be on deck in the tropics.

The "Aki Maru" leaves Melbourne February 23, 1929, Sydney March 2, and Brisbane March 4. Further particulars regarding this attractive tour and others are obtainable on application to the World Tour and Travel Department, of Burns, Philp and Co. Ltd., 312 Collins-street, Melbourne, and their offices in other leading cities of Australia and New Zealand.

Pope's New Irrigation System

Pat. Nos. 9127/22 & 21419/25



The **LATEST, CHEAPEST,** and **BEST,** for **FRUIT FODDER** and **VEGETABLE CROPS.**

One of many testimonials:

Pope Sprinkler Co., Croydon. Highbury, S.A.

Gentlemen,

Having used your irrigation system on my Orange Orchard for two seasons, I consider it the most effective method of orchard irrigation I have yet heard of. The output from the pump delivering eleven thousand gallons per hour, at thirty pounds pressure, is comfortably handled by one man without the necessity of any stop during the day, and by allowing the pump to run for an hour after he leaves work, I get ten hours pumping, or one hundred and ten thousand gallons of water applied for eight hours' work, and an absolutely even distribution of the water as well, in addition to effecting a great saving in labor.

Needless to say, I should not like to have to return to the old furrow and check system of irrigation.

Yours faithfully,
L. J. WICKS.

Full particulars from any of the following:—

POPE SPRINKLERS LTD. (Patentees)

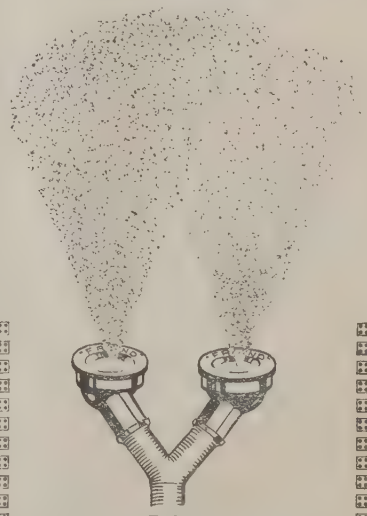
ROBERT STREET, CROYDON PARK, S.A.

Agencies:

John Danks & Sons Pty. Ltd., Sydney.
John Danks & Sons Pty. Ltd., Melbourne.
Messrs. Clark & Fauset, Brisbane.
Messrs. Harris, Scarfe and Sandover Ltd., Perth.
Ivory Bros., Nelson, New Zealand.

"FRIEND"

Economy Spray



Prices:

Twin "Friend" on "Y," 14/-.
Single "Friend," 5/6. Post Free.

The "FRIEND" saves spraying material. The combination of two nozzles gives a fine large cloud, and saves time in spraying operations, thereby reducing the cost of labor.

F. R. MELLOR

440 Elizabeth St., Melbourne

News and Notes

TRADE REPRESENTATIVE IN CANADA.

Advocated by Mr. Cattanach.

Mr. W. Cattanach, Chairman of the Water Commission, Victoria, is of the opinion that Australia should have a Trade Representative in Canada. During his visit to Canada some months ago, Mr. Cattanach studied marketing conditions in the Dominion, and arrived at the conclusion that there was a good market for Australian produce, particularly dried and canned fruits, vegetables, and wines. Practically all the people he had met in Canada were of the opinion that it was unreasonable to expect Canadians to trade with Australia freely under the preferential agreement, unless there was a representative to whom they could refer matters of trade.

According to Mr. Cattanach, Canada was appointing additional Trade Commissioners, and subsidising extra steamship services to every quarter of the globe.

CALIFORNIA FRUITGROWERS.

Want Higher Tariffs.

There is a big agitation by farmers and fruitgrowers in U.S.A. or higher tariffs. The "Country Gentleman," in a leader in the July issue, says: "Obviously, the present tariff does not adequately protect growers. Bananas, the imports of which last year amounted to 34,269,000 dollars, are crowding American-grown Apples and other fruits off our domestic markets." The article further adds, that direct competition in fresh Tomatoes from Mexico, canned Tomatoes from Italy, fruit and nuts from other parts of the world, are pouring into U.S.A. in increasing quantities, and the situation was serious.

California fruitgrowers will now understand how the dried fruits men in Murray Valley feel on the subject of outside competition.

OILED PAPER FOR APPLES.

The method of controlling Apple scald in boxed Apples by wrapping the fruit in oiled paper (as developed by the United States Department of Agriculture), has proved so satisfactory that a modification of the method for barrelled Apples is being tested.

BANANA WAR.

In Great Britain.

A fight for supremacy has started in England among the Banana-exporting countries. Up to the present year, the Banana trade in United Kingdom had been monopolised by supplies from Jamaica and the Canary Islands. Now the Brazilian Banana has made its appearance. It is already being handled in considerable quantities, and shows every indication of being a formidable rival to the old-established products of Grand Canary and Jamaica. The Brazilian Banana has a fine flavor, and is larger than the Canary product. It is being marketed at a much cheaper rate than its rivals, and is packed in "hands," not bunches. There are ten dozen "hands" in each box.

"CANADIAN" STANDARD CASES.

A South Australian correspondent asks for details relative to the specifications of the "Canadian" standard case, which is now becoming popular among Australian growers.

Mr. J. M. Ward, Superintendent of Horticulture, Victoria, gives the following information:—

The measurements of the Canadian standard case are as follows:—18in. x 11½in. x 10½in. (inside measurements). The inside measurements of the Canadian special, or bushel case, are 20in. x 11½in. x 10in. At the present time the Canadian standard case is not allowed to be sold in New South Wales.

The timber requirements for the Canadian standard case are as follows:—

Two ends, one piece each—11¼in. x 10½in. x ⅜in.
Two sides, one piece each—19½in. x 10½in. x 5-16th in.
Top and bottom, two pieces, each 10½in. x 5¼in. x 3-16th inch. (It would be better to have one-piece lid.)

Four cleats, one each end, top and bottom—11in. x ⅜in. x ⅜in.

The timber requirements for the case as used in New South Wales are:—

Two ends, one piece each—11¼in. x 10in. x ⅜in.
Two sides, one piece each—21½in. x 10in. x 5-16th in.
Top and bottom, two pieces each—21½in. x 5¼in. x 3-16th inch.
Four cleats, one each end, top and bottom—11in. x ⅜in. x ⅜in. (It would be better to have one-piece lid.)

Fruitgrowers !

.. Buy Direct from ..
MANUFACTURERS

Fencing Wire, Barbed Wire, Wire Netting, Tanks, Corrugated Iron, Etc., at Greatly Reduced Rates!

OTHER LINES INCLUDE:
Dropper Staples, Fencing Staples, Wire Nails, Down Pipes, Spouting, Ridging, Baths and Basins, Etc.
All Sheet Metal Work.

Write for Price List.

COMMONWEALTH
Barbed Wire and Nail Works
Pty. Ltd.
Office & Works:
94 Sturt Street, South Melbourne.
'Phone: M. 2277.

A NEW SPRAYING OIL.

For Use for Summer Spraying.

As a result of years of developmental work in connection with oil sprays, there is now being placed on the market by the Vacuum Oil Co. Pty. Ltd. a new spraying oil for the control and destruction of insect pests on citrus and deciduous trees. This oil is manufactured in Australia from specially refined mineral white oil. The product when mixed with water forms a most stable emulsion.

This oil can be sprayed on fruit trees, shrubs, etc., when in full fruit and foliage.

Careful tests by the company's chemists in co-operation with orchardists, botanists and entomologists have demonstrated that this special spraying oil at a strength of one in 40 will destroy all scales and aphids infesting citrus and deciduous fruit trees, and at a strength of one in 100, when incorporated with standard arsenate of lead solution, forms a highly efficient spreader, and will seek out and destroy not merely the grub of the codlin moth, but the eggs as well.

Further, this spray can be regarded as a perfect summer spray, being quite safe to use as directed, even upon trees in the tender budding stage or in full blossom.

Care should be taken to see that this special spraying oil is not confused with the ordinary spraying oil, which has been on the market for many years, and is recommended for dormant stage spraying only. The new special spraying oil can be used at any stage, even in mid-summer.

The following is the strength and preparation recommended for scales and aphids on citrus trees:—One gallon Gargoyle special spraying oil to 40 gallons water. Place equal quantities, by measure, of this special spraying oil and water in separate containers. Pour oil into water, and agitate until milky white, then add to bulk of water. That is—one gallon of oil would be thoroughly mixed with one gallon of water and added to 39 gallons of water in the bulk container, the whole making a perfectly stable emulsion.

The time recommended for spraying citrus trees is when the leaf is showing a dark green, and the young growing shoots are well developed, this being the high tide period of the sap flow. The various releases of young scale are generally effected when the fruit sap is available in the vigorous leaf growth.

The strength and preparation for the control and destruction of eggs and grubs of codlin moth with this special spraying oil on deciduous trees are as follows:—The standard strength for Gargoyle special spraying oil on deciduous trees is 1 in 100 (1 gallon oil to 100 gallons lead arsenate solution).

Thoroughly mix lead arsenate and place in vat which has been three-parts filled with water; agitate until the arsenate is in complete suspension; now take equal parts by measure of the special spraying oil and water, place in separate containers, pour oil into water, agitate until milky white, now add two gallons of water, mix up and pour into vat containing arsenate of lead; stir up and fill vat to capacity. The solution is now ready for spraying.

For the control of Bryobia prataensis (red spider) on deciduous trees, a strength of one in a hundred is recommended.

The following general directions are also given for the preparation and use of this special spraying oil:—

(1) Avoid intense heat of day when spraying. (2) Clean utensils are essential. A good practice is to run a strong solution of soda through the pump and hoses before a start is made when oil spraying, as oil emulsions are easily spoilt by traces of lime, tobacco, etc. (3) Do not use more than 8lb. of soda to each 50 gallons of solution when spraying for Indian Wax scale. (4) The standard practice is to use water which is pure, that is, not impregnated with salt, lime or magnesia. If the spray vat has a capacity of 50 gallons of water, pour in 40 gallons. (5) Measure out one gallon of water and one gallon of oil, pour oil into water and agitate until solution is milky white—that is the primary emulsion—pour into bulk of water in spray vat; now fill vat to capacity.

This special spraying oil is also recommended for spraying to combat green and black aphis, which is at present so prevalent on Apricot and Peach trees.

An interesting folder has been prepared on this new special spraying oil, and copies are available on application to the Vacuum Oil Co.'s nearest branch office.

SULFAR
CARBONISED SULPHUR
Spraying Mixture.
THE MOST EFFECTIVE NON POISONOUS FUNGICIDE AND INSECTICIDE YET DISCOVERED
DOES NOT BURN.
Manufactured by
SINCLARE & Co.
BOX 3, KING ST., P.O.-SYDNEY.
(Works,-Alexandria)

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of G. WOOLF & SONS.
Bankers.—National Bank of Australasia (Western Branch), Melbourne.
City Telephone: M 2012. Private Phone: M 3055.
City Address: Box 4003, G.P.O., Spencer St., Melb.

ORCHARD PLOUGH
The COCKSHUTT ORCHARD TWIN GANG MOULDBOARD PLOUGH is specially designed for Orchards and Vineyards. It is carefully built with well-braced steel frame, dust-proof wheels, and best soft-centre steel mouldboards. It can be adjusted in a few minutes, so that it will plough closely to the trees or vines without harming them in any way. The lever can also be tilted to let the plough pass beneath low branches.
The Ideal Plough For Orchardists
Full particulars gladly sent on request. Write to-day.
Also Agents for
"Vega" Separators; "Hercules" Drag Saws; "Eureka" Potato Planters; "New Era" Rope Makers, etc.
Buckeye Harvester CO.
Whiteman Street, Sth. Melbourne

Regular Egg-Supply in Summer

MOST fowls, unless Karswood-fed, are now beginning to go off laying, and this tendency will increase as the weather gets hotter, while the Karswood-fed fowls keep on laying with almost the monotonous regularity of a machine.

This is only natural, because Karswood (which contains dried and ground insects) provides just those constituents (including organic phosphorus) necessary for the formation and growth of large-sized eggs and which cannot be obtained from ordinary food.

In addition, Karswood Poultry Spice provides the fowls with a reserve of energy which fits them for regular and *sustained* laying during the hot summer months. Yet, although Karswood is so beneficial to fowls and so sure, it does *not* force (it contains no forcing ingredients, such as cayenne pepper, gentien, chillies, etc.), but brings about its results in a perfectly natural manner.

Thousands of satisfied users are obtaining excellent results from the regular use of Karswood. You can, too. Give it a trial. A half lb. packet costs but 1/–, and is sufficient for 20 hens for 16 days.

As evidence of the value of Karswood in summer, read the following testimonial, which is but one of hundreds of similar letters which we are continually receiving.

"Use Karswood every morning"

Sear Sirs,

I have ten white leghorn hens. I give them Karswood every morning. I keep a record of the eggs they lay each day. For five months from May 29th until September 29th I got 832 eggs. This month being hot, I decided to leave off the Karswood spice. The eggs dropped from eight and nine a day to two and three eggs a day, so I started using Karswood again this week and have had eight eggs each day since.

I will conclude by saying never again will fowls of mine miss their Karswood Spice.

(Sgd.) Mrs. F. R. WADDLETON,
Terowie, S.A.

Note the Economy

1/– packet supplies 20 hens for 16 days.
2/– packet supplies 20 hens for 32 days.
13/– (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices: ½-lb. packet, Price, 1/–; 1-lb. packet, Price, 2/–; 7-lb. tin, Price, 13/–; 14-lb. tin Price, 25/–; 28-lb. tin, Price, 48/–.

Karswood Poultry Spice

increases egg-production without forcing. It does not contain cayenne pepper or any other forcing ingredient.

30.FP.28

POULTRY NOTES.

Among the Stock.

THE BREEDING SEASON for fowls now being over, all male birds should be separated from the hens, which will lay as well, if not better, without the males.

Any cocks that show signs of not being serviceable for future breeding should be disposed of at once. It is seldom that a male bird can be depended upon for breeding purposes after the third year, and the keeping of such stock is a drain on the profits. The aim of the poultry-keeper should be, "Never keep a bird that does not pay its way."

No attempt should be made to rear weaklings.

There should be no delay in marking the feet of chickens for age determination. It is the only means whereby the common mistake of disposing of young profitable birds, and retaining old, unprofitable birds, can be obviated with certainty.

Care of Incubators.

A matter that now requires attention is the thorough cleaning and disinfecting of incubators. The lamps, as well as the burners, should be washed in boiling water, thoroughly dried, and, together with the regulating devices, connecting rod, etc., placed inside the incubator. This will not only assure that these parts are in good working order when required next season, but that the life of the incubator will be greatly prolonged.

Sour Crop, and Its Cure.

Soft or sour crop is often brought about by irregular feeding and watering of the birds, and few cases occur on a well-managed farm. It is often associated with feeding an undue amount of fibrous material—even lawn sweepings or damaged grain will often bring on this trouble—but the most prolific cause is allowing the water vessels to become empty. The birds, perhaps, get a full feed of grain or other material that swells, and then get water while thirsty, and full of feed; the consequence is that the crop becomes distended and fails afterwards to contract to the normal size, and a relaxed state of the crop is set up, followed by an unhealthy action of the organ, which causes a kind of dyspepsia.

Very little that is worth while can be done for a crop that has been badly over-distended, and the trouble becomes chronic, but in the lighter cases relief may be given, and a cure, perhaps, effected.

When the food has apparently become sour in the crop, 15 to 20 grains of carbonate of soda in a little warm water may be administered to correct the acidity, and the bird should be fed sparingly and on soft food for a few days.

In cases where a ball appears to lie in the crop, fibre or some indigestible material may be suspected, and an operation may be found necessary to remove the offending substance. The operation is a simple one, and consists in making at the bottom of the crop an incision large enough to enable the substance to be removed. The crop should then be washed out with a weak solution of permanganate of potash, and the incision stitched up, taking care to stitch separately the crop and the outer skin.

In cases of common "crop-bound," the latter treatment is also advisable, or an endeavour may first be made to knead the crop gently, after having administered a little warm water and salad oil.

ENGLISH MARKET FOR AUSTRALIAN EGGS.

Winter Export Trade Possibilities.

Although at present only three eggs of every thousand consumed on the English market are of Australian origin, there is undoubtedly a large market for Australian eggs exported during August, September, and October, so as to reach Great Britain during the winter months, when home-produced supplies are low.

The Imperial Economic Committee pointed out in a recent report that between 1921 and 1926 the exports of eggs from Australia had increased from 5,000,000 to 37,768,000 eggs, and that it should be possible to secure a larger share of the British market—which paid £21,500,000 in 1926 for imported eggs and poultry—by increased home production, supplemented by Empire produce from the Southern Hemisphere, at least during the winter months.—"Cold Storage."

BEEKEEPING.

Brood-Rearing.

ALL danger of bees dying of starvation should be over. If the bees have received the required attention, work should have progressed in the first super, and some of the stronger colonies may now require even more room. Where excluders are not being used, the queen, if young and vigorous, will probably be making use of at least three of the centre combs in the super. This is a good sign, provided the combs in the brood-chamber are fully occupied with brood. A good young queen requires more laying room than is provided in a ten-frame chamber. If it is desired to use excluders to ensure that all combs in the super are free from brood at extracting time, that objective can be attained by inserting the excluders a month before it is proposed to extract. By that time the swarming season will be practically over, and as the queen will not be laying quite so freely, less room will be required for the brood.

Swarming Control.

The putting on of the first super will have checked the first impulse to swarm, but difficulties in this direction are not over, and further measures will be necessary.

Various schemes have been introduced from time to time to control swarming. The method adopted must be determined by local conditions. Bees require considerably less attention in districts favoured with a light honey flow extending from November to March. Sometimes the flow is confined to a few weeks between the middle of December to the middle of February, and the flow during that time is very erratic.

Sometimes the nectar is coming in so fast that the bees appear to become frantic in their efforts to find room for it. Every available cell is filled, with the result that the queen is restricted in her laying, and the swarming impulse engendered. If every colony is headed by a young queen, swarm control is then simply a matter of providing plenty of room for the queen's use, and the storage of honey, and ventilation.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.

Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Davis, J., Western Market.
Dennys, Lascelles Ltd., Temple Court, Melbourne.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
Mills, J. B., & Co., Bank House, Bank Place Melbourne.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
F. B. Bolton.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Piesse & Co., C.

Launceston.

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.

Dennis & Cooper Ltd., Covent Garden.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish, & Smart, Covent Garden.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salters Hall Court, Spitalfields Market, E.1.

Hull.

White & Son Ltd.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip and Co. Ltd., 7 Bridge St., Sydney.

Manchester.

The Port of Manchester, rep., W. J. Wade, 8 Bridge Street, Sydney.

GERMANY.

Bremen.

Fruchthandel, Gesellschaft.

Hamburg.

Astheimer, P. H., & Son, Fruchthof.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

ENGLISH FRUIT SALES.

J. C. Houghton and Co., Liverpool, report early supplies of American Apples to be adequate for September. Many of the barrel Apples were poor lots, but boxed Apples were in good condition. Apples in barrels brought from 10/6 to 26/6, and boxed Apples 8/3 to 15/3. A parcel of Cox Orange from Washington brought the highest prices.

South African Oranges maintain the previous good standard of merit, and prices ranged from 15/- to 28/- per case.

Californian Grape Fruit brought 24/- to 25/-, and Porto Rico Grape Fruit 21/- to 26/-. Italian Lemons brought 22/6 to 47/- (small boxes) and 40/- to 63/- (large boxes).

London (September 13).—Mr. J. O. Sims, fruit broker, Boro' Market, London, reports under date September 13:—Auction Sales—Almeria Grapes, 12/- to 22/- per barrel, mostly 14/- to 18/6; S. African Oranges (counts 17/6—21/6), seedlings 18/-, 22/-, navels 20/-, 23/-; Jaffas 16/-, 19/-; Late Val., 19/6, 21/-; smaller and larger sizes at lower prices. Naples and Messina Lemons, 300's, large 40/-, 48/-; larger, 52/-, 61/-; 360's, 24/-, 36/-.

AUSTRALASIAN MARKETS.

New South Wales.

Sydney (16/10/28).

Mr. F. Chilton, City Fruit Markets, reports, under date 16/10/28, as follows:—The Sydney markets continue to be heavily supplied with Tasmanian Apples, local Oranges and Queensland Pines. As Cherries have made an appearance already, and other early soft fruits will soon follow, the prospects for remainder of the season do not appear bright for the usual good end-of-season prices.

Queensland Fruits.—Bananas, 8/- to 24/- per case; Papaws, 8/- to 16/-; Pines, smooth leaf, 7/- to 12/-; Tomatoes, 6/- to 17/- per half-case; Cucumbers, 5/- to 11/- per bus. case. New South Wales Fruits.—Bananas, Tweed River, 8/- to 24/- per case; Lemons, 5/- to 9/- per bus. case; Navels, 10/- to 14/-; Mandarins, 4/- to 15/-; Oranges, 3/- to 8/-; Apples, Granny Smith, 10/- to 16/-; Passions, 15/- to 25/- per half-case; Loquats, 4/- to 11/-; Cherries, 12/- to 20/- per quarter bus. case. Victorian Fruits.—Pears, Jos. 8/- to 15/- per bus. case, W.N. 6/- to 10/-, Broompark 6/- to 10/-; Apples, R.B. 5/- to 9/-, Yates 6/- to 11/-. Tasmanian Fruits.—Apples, F.C. 4/- to 9/- per bus. case, S.P.M. 4/- to 9/-, C.P.M. 6/- to 9/-, Dem. 6/- to 10/-, S.T.P. 3/- to 6/-.

Victoria.

Melbourne (30/10/28).

The following are the wholesale prices ruling at the Western Market:—Apples, dessert, 4/- to 6/- per case; cooking, 3/- to 5/-; faulty lots, cheaper. Lemons, Vic., 5/- to 7/-; specials, 8/-. Mandarins, 6/- to 12/-; Vic. common Oranges, 6/- to 12/-; N.S.W., 6/- to 9/-; Vic. Valencias, 8/- to 13/-; Navel Oranges, Murray districts, Vic., good counts, 14/- to 17/-; large sizes, 9/- to 13/-; others, 12/- to 14/- and 8/- to 11/-. Pineapples, Queens, 10/- to 12/- double case. Tomatoes, S.Aus., 16/- half case; Queensland, 6/- to 12/-; Cucumbers, 7/- to 13/- per case.

The Victorian Central Citrus Association reports that Victorian and border standard navels sold as follows:—60's, 9/- to 10/-; 112's and upwards, 15/- to 17/-; specials higher; common Oranges, 6/- to 13/-; specials higher; Late Valencias, standard, 8/- to 10/-; special, 8/- to 13/-; Lemons, 5/- to 8/-; Mandarins, 6/- to 13/-; Grape Fruit, special, 24/- to 30/-.

South Australia.

Adelaide (25/10/28).

Fruit.—Apples (eating), 6/- to 8/- per case; cooking, 4/- to 6/-; Bananas, 25/-; Citrons, 6/-; Lemons, 6/-; Loquats, 7/-, special; Melons, pie, 4/- cwt.; Almonds, 12/- per dozen lb.; Brazil nuts, 12/-; Peanuts, 11/6; Walnuts, 12/-; Barcelona nuts, 12/-; Oranges, common, 8/- per case; blood, 10/-; navel, 14/- to 16/-; poorman, 5/-; Passion Fruit, 38/- to 40/-; Pears, eating, 6/-; Pineapples, 18/- to 20/-.

Queensland.

Brisbane (24/10/28).

Local Fruit.—Oranges, specials to 11/-, others 6/- to 9/-, small 3/- to 5/- a bushel case; Mandarins, 9/- to 14/-; Papaws, ripe 3/- to 5/-, rough 10/- to 13/- a case, smooth 5/- to 7/-; Passion Fruit, 9/- to 20/- a half-bushel case; Gooseberries, 6d. per lb.; Strawberries, 6/6 to 10/-, specials higher, a dozen boxes; Townsville Mangoes, 5/- to 7/-, Bowen 7/- to

9/-. Imported Fruit.—Apples, Tasmanian, S.T.P. 3/- to 7/- a bushel case, F.C. green 8/- to 9/-, colored 3/- to 5/-, Dem. 10/- to 12/-; Cref., 7/- to 9/-, Scar. 4/- to 9/-, Jon. 8/- to 10/-; Victorian, Y. 7/- to 10/-, State 5/- to 8/-, R.W. 5/- to 8/-, Jon. 8/- to 10/-; Pears, Tasmanian, 10/- to 13/-; Victorian, W.N. 10/- to 14/-, Jos. 10/- to 15/-, M.C. 10/- to 13/-; New South Wales Oranges, 8/- to 11/-; Cherries, 10/- to 18/- a tray.

Tasmania.

Hobart (13/10/28).

The local fruit market was a shade firmer, and good lots sold at higher rates. Delicious 4/6 to 8/-, N.Y.P. 4/- to 7/6, S.T.P. 3/- to 5/-, F.C. 2/- to 3/6, S.P.M. 2/- to 3/6, Senators 3/- to 3/9, R.B. 3/- to 4/-, Dem. 3/6 to 5/6, S.P. 3/- to 3/6. Small, spotty and inferior quality, 1/3 to 2/- per case.

Western Australia.

Perth (19/10/28).

Producers' Markets Ltd., Perth, report prices ruling as follows:—

Fruit.—Supplies of fruit were heavy again for to-day's sale. All lines in good demand. Apples were in demand at late rates. Navels and Valencias were well supplied, and values were firm throughout. Tomatoes were heavily supplied, and values were firm. Apples, dumps, G. Smith 17/- to 23/6, others from 15/-; Yates 19/- to 23/-, others from 17/-; R. Beauty, 13/- to 17/6; Statesman, 16/- to 17/9; Stone Pippin 13/- to 17/-, others from 10/-; Rokewood 14/- to 16/6, others from 11/-; Commerce, 14/-; Cleo., 14/3; Nickajack, 11/- to 15/6; Doherty, 14/- to 17/-; Sturmer, 12/- to 12/6. Navels, 18/- to 23/6, others from 13/-, ¾ bush. 10/- to 15/6, others from 6/-; Valencias, dumps, 13/- to 19/3, others from 10/-, ¾ bush. 10/- to 15/3, others from 7/-. Oranges, dumps, 11/- to 12/9, ¾ bush. 7/- to 13/-. Lemons, 6/6 to 10/9; others, from 4/3. Loquats, 10/- to 17/9; others, from 7/-. Mandarins, 10/- to 14/9. Tomatoes, 14/- to 20/-; special, to 25/3; others, from 7/-. P. Fruit, ½ bush., 18/- to 19/6. Capes, 8d. to 10½d. lb. Strawberries, 15/- to 21/6; others, from 9/6.

New Zealand.

Dunedin (12/10/28).

Messrs. Reilly's Central Produce Mart report under date 12/10/28 as follow:—Shipping services between New Zealand and Australian ports disorganised, owing to strike. Fruit by the "Karetu" met a ready sale; some lines of Mandarins condemned owing to fruit fly. Lemons are realising 16/- to 20/-; Navels, 20/-; Mandarins, 20/- to 23/-; Valencias, 15/- to 18/-; Joppas, wasty, 10/- to 12/-; Queensland Pines, 26/-; Passions, 28/-.

MELBOURNE FRUIT MARKETS.

Parked Motor Cars Interfere with Business at Western Market.

Removal to Victoria Market Advocated by Merchants.

Fruit merchants at the Western Markets report that poor prices and slow sales have been ruling of late. Now another trouble has come along in the shape of the motor-car and its inconsiderate owner. Parking space is limited in the area adjacent to the market, and there is always a long line of cars parked close to the kerb in the square occupied by the market buildings.

On many occasions lately the fruit merchants, particularly those with a frontage to William-street, have been held up in their business because there was no space available in front of their store for motor-trucks to draw up and discharge or take away loads of fruit. Complaint has been made to the City Council, but nothing has been done to put a stop to this state of affairs.

Fruit merchants state that this is another argument in favor of the transfer of the Western Markets to a site at the Victoria Markets, and the sooner the transfer is made, the better it will be for those engaged in the wholesale fruit trade.

One wholesaler, who sold produce from a truck in the street because there was no room for the truck to be unloaded at his store, was threatened with prosecution, and probably will be fined for doing so. Yet it is not an offence for a car-owner to block up a man's place of business, and prevent that man from transacting his business in an expeditious manner.

The council would certainly not allow a barrowman to occupy a space along the kerb in any business section of the city. Why allow motor-cars to hold up the business of the fruit merchant?

Any difficulties in the way of the trade are, of course, reflected in the returns to the grower.

TRADE NEWS.

Mr. N. N. McLean, formerly partner in the business of F. Cave and Co. Pty. Ltd., has commenced business on his own account as a fruit merchant and exporter. His trading name is N. N. McLean Pty. Ltd., and the registered office is situated at Western Market Buildings, 50 William-street, Melbourne. This company is also the Victorian agents for Gibbs, Bright and Co., the distributors of "Cloudform" dusting materials and guns. Mr. McLean has been giving a number of interesting demonstrations in the country with these materials during the last few months.

Mr. A. G. Lester, formerly manager of fruit department, Dennys, Lascelles Ltd., is now in business on his own account as fruit exporter. His address is 410 Flinders-lane, Melbourne.

UNSATISFACTORY CITRUS VARIETIES.

"Navelencia" and "Thompson's Improved."

Nurserymen are Asked to Refrain From Cataloging Them.

The Victorian Central Citrus Association has written to the Nurserymen and Seedsmen's Association as follows:—

As you are probably aware, growers generally are very dissatisfied with Navelencia and Thompson's Improved Navel Orange trees. Only in very few instances have these trees given satisfactory results, and in many districts, particularly in the Leeton and Griffith areas, growers are systematically budding them over to other types.

These varieties appear in most nurserymen's catalogues, and some of them go so far as to highly commend them to growers.

The question of deprecating the further planting of these varieties was discussed at a recent meeting of the Federal Citrus Council, when the following resolution was unanimously carried:—

"That the attention of nurserymen be drawn to the generally unsatisfactory nature of these varieties and that the nurserymen be requested to consider the question as to whether they should continue to advocate their planting."

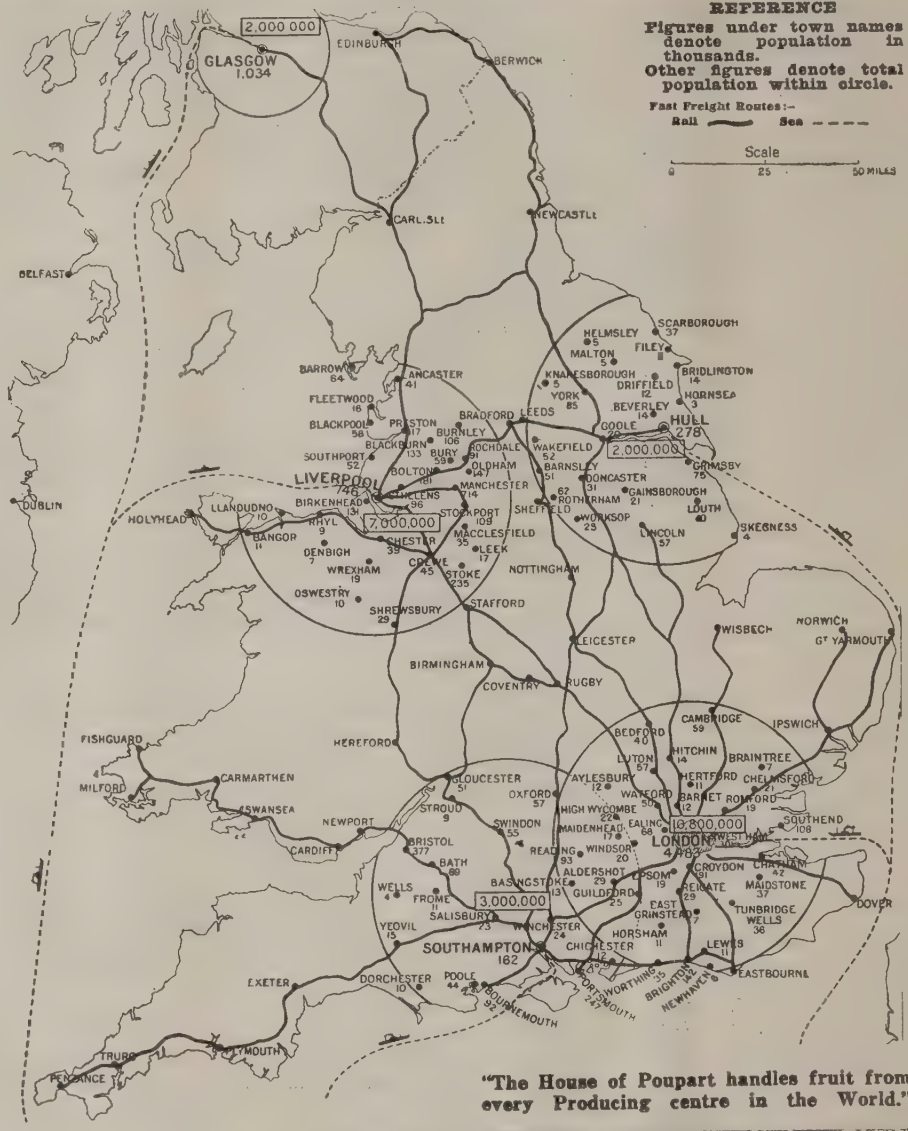
CORRECT.

Teacher: "Now, children, a collision is two things coming together unexpectedly. Willie, give me an example."

"THE POUPART SALES SERVICE"

FRUITGROWERS THE WORLD OVER Avail yourselves of the **POUPART SELLING ORGANISATION**

In 1926 the T. J. POUPART SERVICE handled over 4,000,000 packages of fruit and paid £200,000 for freight.



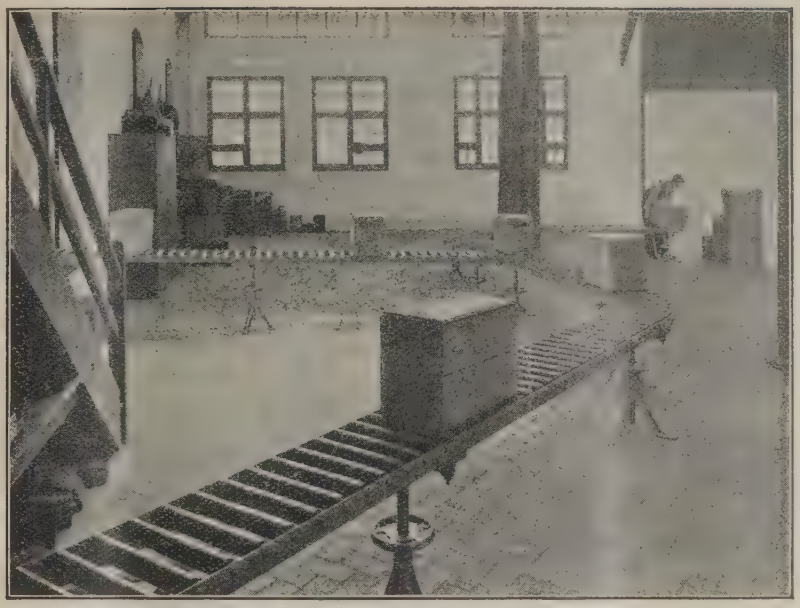
"The House of Poupart handles fruit from every Producing centre in the World."

T. J. POUPART LTD.

LONDON - LIVERPOOL - HULL - SOUTHAMPTON AND GLASGOW

Tasmanian Growers ship through Eric Burgess Pty. Ltd., 88 Collins Street, Hobart.
Victorian Growers ship through Fred J. Andrew, 416 Little Collins Street, Melbourne.
South Australian Growers ship through A. W. Bowen & Co., Commercial Building, 9 French Street, Adelaide.
Western Australian Growers ship through Harvey G. Rae, 1 Thomson Road, Claremont, W.A.
New South Wales Growers ship through C. Geo. Kellaway & Son, Office 25, City Fruit Markets, Sydney
New Zealand Growers ship through Griffin & O'Brien, P.O. Box 104, 89 Hardy Street, Nelson.

FRUIT GROWERS



COOL STORES

Our Gravity Ball Bearing Roller Conveyer will solve your handling and conveying problems by carrying your cases wherever you desire. **No Power Required**

Substantial Construction - Long Life - Easily Transported - First Cost is Only Cost

Made in Australia by SCHUMACHER MILL FURNISHING WORKS PTY. LTD., Port Melbourne Victoria

Fruchthandel Gesellschaft

Scipio & Fischer

Fruchthof-Bremen

Fruchthof BREMEN Germany

Cable Address: "Orange," Bremen

Established 1902

AUSTRALIAN REPRESENTATIVES:

Victoria: The International Fruit & Mercantile Co., 410-416 Flinders Lane, Melbourne.

South Aust.: Messrs. Gelsh & McRae Ltd., Adelaide.

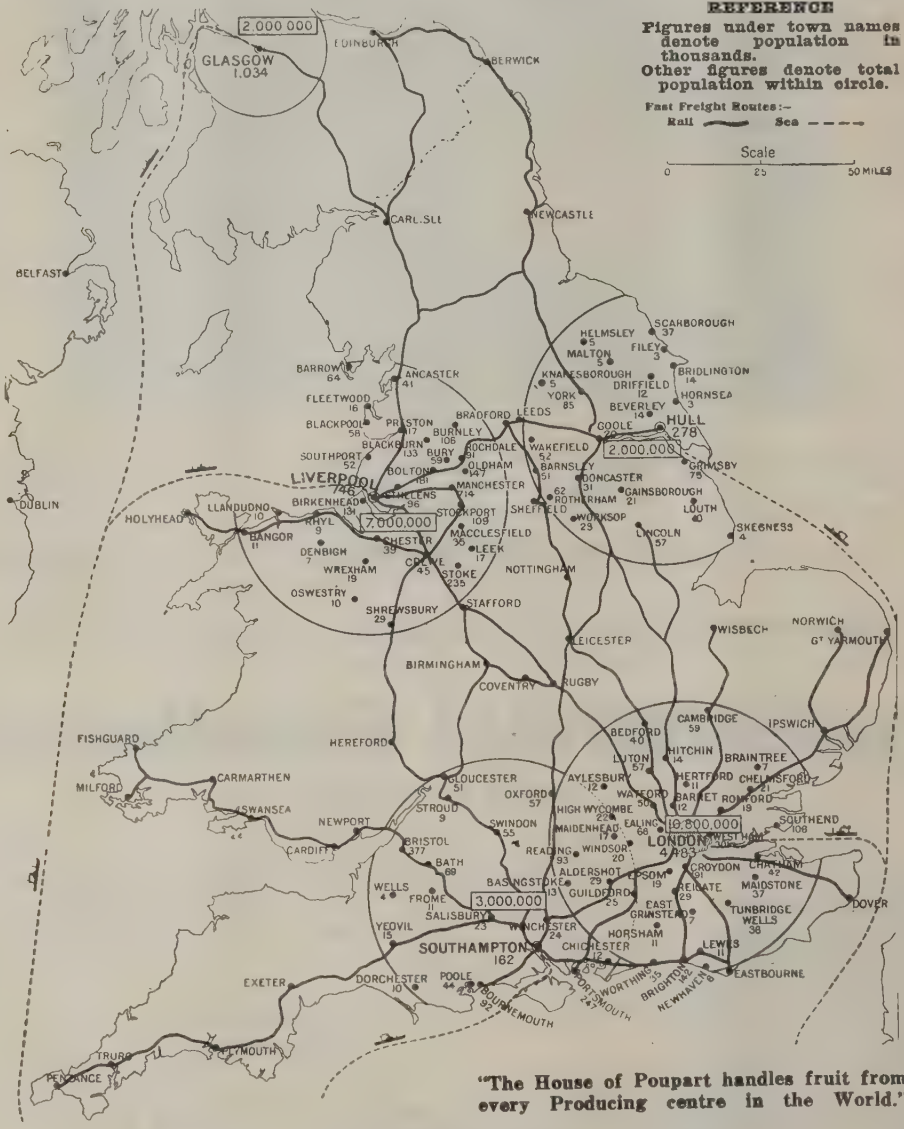
West Aust.: Messrs. Paterson & Co., Ltd., Perth.

Tasmania: Messrs. H. Jones & Co. Ltd., Hobart.

"THE POUPART SALES SERVICE"

FRUITGROWERS THE WORLD OVER Avail yourselves of the **POUPART SELLING ORGANISATION**

In 1926 the T. J. POUPART SERVICE handled over 4,000,000 packages of fruit and paid £200,000 for freight.



"The House of Poupart handles fruit from every Producing centre in the World."

T. J. POUPART LTD.

LONDON - LIVERPOOL - HULL SOUTHAMPTON AND GLASGOW

Tasmanian Growers ship through Eric Burgess Pty. Ltd., 88 Collins Street, Hobart.
Victorian Growers ship through Fred J. Andrew, 416 Little Collins Street, Melbourne.
South Australian Growers ship through A. W. Bowen & Co., Commercial Building, 9 French Street, Adelaide.
Western Australian Growers ship through Harvey G. Rae, 1 Thomson Road, Claremont, W.A.
New South Wales Growers ship through C. Geo. Kellaway & Son, Office 25, City Fruit Markets, Sydney
New Zealand Growers ship through Griffin & O'Brien, P.O. Box 104, 89 Hardy Street, Nelson.

M. ASVARISCH

FRUIT BROKER

Copenhagen - Denmark

Consignments Received. Jorks Passage.

Telegraphic Address: Asvarisch, Copenhagen.

Inquiries for Victoria and South Australia.

to

J. B. MILLS & CO.

Bank House - Bank Place - Melbourne

Ship Your Oranges, Lemons, Grapes to New Zealand

All consignments for this market will have careful attention and realize highest prices if sent to

The Co-operative Fruitgrowers of Otago Limited, Dunedin

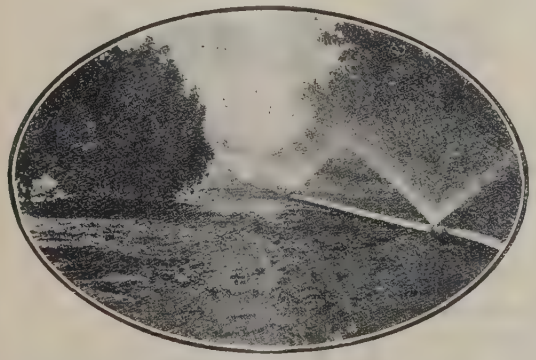
Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable "Peachbloom," Dunedin.

Pope's New Irrigation System

Pat. Nos. 9127/22 & 21419/25



The **LATEST, CHEAPEST,** and **BEST,** for **FRUIT FODDER** and **VEGETABLE CROPS.**

One of many testimonials:

Pope Sprinkler Co., Croydon. Highbury, S.A.

Gentlemen,

Having used your irrigation system on my Orange Orchard for two seasons, I consider it the most effective method of orchard irrigation I have yet heard of. The output from the pump delivering eleven thousand gallons per hour, at thirty pounds pressure, is comfortably handled by one man without the necessity of any stop during the day, and by allowing the pump to run for an hour after he leaves work, I get ten hours pumping, or one hundred and ten thousand gallons of water applied for eight hours' work, and an absolutely even distribution of the water as well, in addition to effecting a great saving in labor.

Needless to say, I should not like to have to return to the old furrow and check system of irrigation.

Yours faithfully,

L. J. WICKS.

Full particulars from any of the following:—

POPE SPRINKLERS LTD. (Patentees)

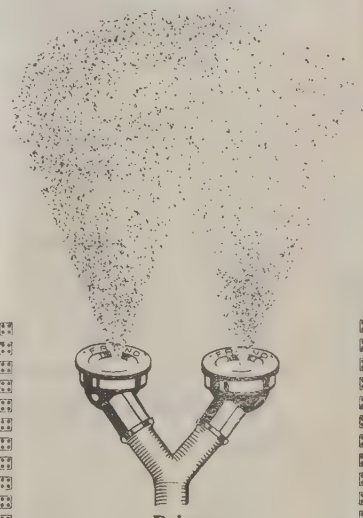
ROBERT STREET, CROYDON PARK, S.A.

Agencies:

John Danks & Sons Pty. Ltd., Sydney.
John Danks & Sons Pty. Ltd., Melbourne.
Messrs. Clark & Fauset, Brisbane.
Messrs. Harris, Scarfe and Sandover Ltd., Perth.
Ivory Bros., Nelson, New Zealand.

"FRIEND"

Economy Spray



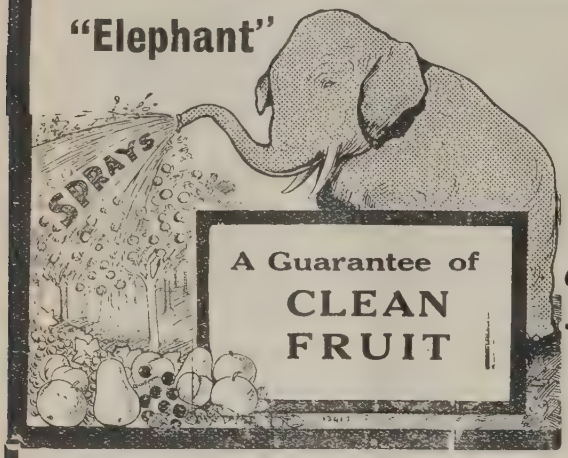
Prices:

Twin "Friend" on "Y," 14/-.
Single "Friend," 5/6. Post Free.

The "FRIEND" saves spraying material. The combination of two nozzles gives a fine large cloud, and saves time in spraying operations, thereby reducing the cost of labor.

F. R. MELLOR

440 Elizabeth St., Melbourne



ORCHARDISTS

Spraying is essential, and your best Insurance. Therefore it is necessary to use only the Best Sprays obtainable.

The successful grower uses

"Elephant" Brand

Sprays Only

Don't Neglect Your Spraying

The fruit crop is light and Apples will be scarce and dear next season, therefore spray thoroughly and frequently with

"Elephant" Brand

Arsenate of Lead

Paste and Powder

Remember! Spraying thoroughly not only saves your apples this season but reduces the number :: of Codlin to contend with next season ::

WRITE FOR PRICES AND PAMPHLET

JAQUES PTY. LTD.,

are the Actual Manufacturers and Distributors of "Elephant" Brand Sprays

Manufacturing Chemists, MADDEN GROVE, BURNLEY, E.1., MELB., Vic.

Telephone: J 2008.

Agents: Seedsmen, &c.

INTERSTATE AGENTS:

N.S.W	Q'LD.	S.A.	W.A.	TAS.	N.Z.
PRODUCERS' DISTRIBUTING SOCIETY Ltd. Valentine & Quay Streets, SYDNEY.	BUZACOTTS LTD. Adelaide Street BRISBANE	SILBERT, SHARP & BISHOP LTD., Rundle Street, ADELAIDE.	WESTRALIAN FARMERS' LTD., 569 Wellington St., PERTH.	R. NETTLEFOLD PTY. Hobart. BELL & GERRARD Launceston. COCKER, BELL Pty. Devonport.	PIZZEY, McINNES LTD., Box 1114, G.P.O., AUCKLAND.

Contents for December 1928

Illustration.

Manchester Dock Scene 479

Subjects.

Answers to Correspondents 467–8
Apple and Pear Grading Regulations 472
Australian and N.Z. Apples in England 483
Battle of the Orchardist .. 483
Beekeeping Notes .. .. .. xvii.
U.S.A. Citrus Industry 469–70
Bud Selection, Importance of 470
Canned Fruits 496–7
Christofleau's Electroculture 467
Citrus News and Notes .. 476–7 XV.
Citrus Growers at Murrabit 477–8
Codlin Moth Control 473
Developing British Ports .. 479–842
Dicky Rice Weevil 476
Dried Fruits Industry 487–8–9
Editorial Chats 467–8
English Apple Market, The 483–4
Fruitgrowing in Otago, New Zealand 474
Fumigation of Produce 489–90
Insect Pests in the Orchard 492
Letters to the Editor 467
Manuring Fruit Trees 466
Markets—British and Australian .. .. 500–XV.
News in Brief 470
New South Wales News and Notes 473–4–5
New Zealand Notes 475
Obituary .. .. XV.
Orange Export Losses 468
Pear and Cherry Slug 473
Pear Culture 467
Personal 470
Poultry Notes .. .. xviii.
Preserving Citrus Fruits .. XV.
Queensland 484–5
Reducing Fruit Tree Varieties 474
Science of the Soil, The .. 463–4–5
Shipping Fruit Without Refrigeration 468
South Australia 471
South Australian Fruit Crop Estimates 471
South Australian Marketing Association 482
Tasmania—News and Notes 485–6
Thrips and Aphis 465
Orange — Valuable New Variety 470
Victoria, Crop Prospects, etc. 493–4–5
West Australia 498

INDEX TO ADVERTISERS.

Books, Publications—

"Garden Lover," Bank House, Bank Place, Melbourne, p. xxv.

"Fruitgrowers and Gardeners' Pest Control Chart," Fruit World Pty. Ltd., Bank Place, Melbourne, cover ii., xxv.

Berry Baskets—

Australian Berry Baskets Coy., 185 William St., Melbourne, p. v.

Canning Machines—

Austral Otis Andebar Cannery Equipment Pty. Ltd., Hanna St., South Melbourne, p. xxii.

Heine, John and Son Ltd., Sydney, N.S.W., p. xxiv.

Cold Storage—

Bender and Co., 100 Elizabeth Street, Launceston, Tas., cover ii.

Dehydration—

"Simplex," Clyde Engineering Co. Ltd., Granville, N.S.W., p. 498.

Fruit Buyers—

Brooke, C. M., & Sons, Whiteman St., South Melbourne, p. 497.

Fruit Tree Suppliers—

Brunning, John, and Sons, Somerville, p. 462.

C. A. Nobelius & Sons, Emerald, Vic., p. 496.

Picnic Point Nurseries, Bairnsdale, Vic. (C. J. Goodman), p. 492.

Two Bays Nurseries, Mooroduc, Vic., p. xx.

Fruit Graders—

"Lightning," Lightning Fruit Grader Co., 5 Hoddle St., Collingwood Vic., p. 494.

"Harvey-Delany," D. Harvey, Whitehorse Road, Box Hill, p. 491.

Irrigation—

Pope Sprinklers Ltd., Robert St., Croydon Park, South Australia, p. xiii.

Manures, Fertilisers, &c.—

Sulphate of Ammonia, Australian Sulphate of Ammonia Propaganda Committee, 360 Collins St., Melbourne, p. 497.

"Urea" Diammonphos," Dyes and Chemicals (Aust.) Ltd., Sydney and Melbourne, p. 499.

Orchard Ploughs, Cultivators, &c.—

D. Harvey, Box Hill, Melbourne, p. 491.

Buckeye Harvester Co., Whiteman St., Sth. Melbourne, p. 497.

Orchard Requisites—

Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.

Patent Attorney.—

Geo A. U'Ren, Henty House, 499 Lit. Collins St., Melbourne, p. 485.

Poultry—

Karswood Poultry Spice. Agents all States, p. xvi.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Roller Conveyors—

Schumacher Mill Furnishing Works Pty. Ltd., Port Melbourne, p. xi.

Spray and Dusting Material—

"Aero" Brand Arsenate of Lead, A. M. Bickford & Sons Ltd., 42-44-46 Currie St., Adelaide, p. xix.

"Albarol" White Oil, Lane's Ltd., Abercrombie and Levey Sts., Sydney, p. v.

"Blackleaf 40," Tobacco By-Products and Chemical Co., Kentucky, U.S.A., p. iv.

"Blue Bell" Arsenate of Lead, Lime, Sulphur, etc., Blyth Chemicals Ltd., Elsternwick, Vic., p. iii.

"Elephant" Brand. Jaques Pty. Ltd., Madden Grove, Burnley, Vic., p. xiv.

"Gargoyle" Spraying Oil, Vacuum Oil Co. Pty. Ltd., cover i.

"Swift's" Arsenate of Lead, H. W. Peabody & Co., Sydney and Melbourne, p. viii.

"Clensel," Clensel Pty. Ltd., 184 Queen St., Melbourne, p xviii.

"Vallo" Orchard Sprays, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, p. vii.

"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. 499.

Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond Vic., p. ix.

"Yarra" Fruit Sprays. Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 489.

Neptune Oil Co., 365 Kent St., Sydney, and all States, p. xxi.

Spray Pumps and Guns—

"Bave-U" Power Sprayer, Russell & Co., Box Hill, cover ii.

"Friend" Economy Spray, F. R. Mellor, 440 Elizabeth St., Melbourne, p. xii.

"Sunshine Sprayer," H. V. McKay Pty. Ltd., Sunshine, Vic., p. 499.

Strapping Fruit Cases—

Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.

"Griplock," Wire Strapping, Safe Seal Systems, Waltham Place, Richmond, Vic., p. xx.

Strawboard Liners for Cases—

J. Fielding & Co. Ltd., Chalmers St., Sydney, p. xxi.

Transport—

London and N. E. Railway, Burns, Philp & Co., agents, p. v.

Tree and Stump Pullers—

Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix.

"Digger," Quick Manufacturing Co., 75 Pender St., Thornbury, p. 499.

Wire—

Commonwealth Barbed Wire & Nail Works Pty. Ltd., 94 Sturt St., Sth. Melbourne, p. xviii.

Fruit Trees Booked Now

for 1929 Planting

APPLES	QUINCES	CHESTNUTS	OLIVES
PEARS	FIGS	GOOSEBERRIES	GUAVAS
PLUMS	CHERRIES	CURRANTS	BRAMBLES
PRUNES	WALNUTS	RASPBERRIES	LOQUATS
ALMONDS	ORANGES	NUTS	PERSIMMONS
APRICOTS	LEMONS	MEDLARS	VINES
PEACHES	MANDARINS	POMEGRANATES	STRAWBERRIES
NECTARINES	MULBERRIES	PASSIONS	RHUBARB
			LOGANBERRIES

Grown on Virgin Soil Only—Each Year a Fresh Block is Planted. No chances for Diseases or Weak Trees.

All Leading Varieties from—

JOHN BRUNNING & SONS

Somerville Nurseries - - Somerville, Victoria, Australia

ESTABLISHED 1866

One of the Largest Exporters of Fruit Trees to Overseas Clients in the Trade.

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked 'Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States.

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

HEAD OFFICE:

78a VICTORIA STREET, Melbourne, Victoria.

Address all correspondence to

Box 1944 G.P.O. Melbourne

Sydney Office: Post Office Chambers, 335 George Street, Box 2147.L.L., G.P.O. FRANK CLARKE, Representative.

British Office: Harvey, H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., A.A.I.S., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director:

Hon. L. SHOOBRIDGE, M.L.C.

HAULING FRUIT BY AIRPLANE.

The last few years have witnessed many improvements in the manner and methods of delivering perishables to the market places of the world. First came the development of the modern refrigerator car. Then followed the work of constructing efficient types of ocean going steamers suitably equipped with refrigerator space. With the advent of paved highways, the swift moving and easy riding motor truck equipped with pneumatic tyres was pressed into service. Now comes the latest means of transportation—the airplane.

Airplanes are carrying fresh fruit, flowers and vegetables from Netherland gardens to European cities.

In one month this year, according to estimates, planes of the Royal Dutch Air Lines transported fully 150,000 pounds of fruit and vegetables to London alone. During tulip time, flowers were delivered in London, Paris and Scandinavian cities within ten hours of their picking.

BUD SELECTION.

"Bud selection is as important with deciduous as with citrus fruits. The work is fundamentally important in developing the industry," so writes Mr. A. D. Shamel, of California, U.S.A.

The Science of the Soil.

Remarkable Achievements of Science.

Diseases Conquered ∴ Production Increased.

By Sir John Russell, Director of the Rothamsted Experiment Station.

MODERN FARMING may be said to have begun about 40 years ago, when the development of transport first made it possible to carry agricultural products easily from one country to another. Until that time farmers in every country had had a natural monopoly. They had the best protection in the fact that competitors could not get their produce into the market owing to the lack of transport. However, when 40 years ago transport facilities were improved, and it was possible to carry grain from America and Australia and other countries to Europe; the old style of farming had to go, and the new farming was adopted. The old farming had aimed at producing everything which the community required. It produced the bread, the meat, the barley which was used in making beer, and the wool and hides. Under the new conditions it was possible to import these products instead of producing them locally. There was a great disturbance, and farmers in England suffered considerably at the time the change came about. Things gradually settled down. Science was brought in to help the farmer, and it aimed at doing so in two ways; first, by increasing the yield per acre; and, secondly, by lowering the cost of production. Both methods have been successful.

The application of science to agriculture was facilitated by the circumstance that farmers had themselves introduced great improvements. Their advances had been made by the purely empirical method of trial and error; accident and chance observation. It is remarkable how much was achieved in this way, but the process was exceedingly slow, and many years elapsed before any advance could take place. Nowadays farmers cannot wait for accidental discoveries; the scientific method is quicker and more certain. It consists in first discovering the facts and principles involved, and then, armed with as much knowledge as possible, seeking some improvement on present practice.

Development of Rotations.

The old system of agriculture in England was based on a rotation well known in Australia—fallow, wheat, then a second grain crop (usually barley for beer, but sometimes peas), grazing on the stubble, and then fallow again. That system is very ancient; it was used by the Saxons, and it remained permanent for about a thousand years. The only manure used was farmyard manure and composts made of earth and vegetable matter. The yield of wheat was about 10 to 15 bushels an acre, so far as can be ascertained. In the eighteenth century agriculturists began to introduce improvements; they diversified their farming. Instead of fallowing, they put in clover before the wheat; after that a fodder crop—turnips—and then barley. Later farmers further extended the rotation to five or six crops, introducing potatoes and other crops with great advantage. Sheep farmers in the south of England, with a rainfall of 25 to 30 inches, have diversified their rotation so much as to make it extraordinarily complicated. The natural pasture being insufficient, large quantities of green crops are now grown to provide food for the flocks, and the rotation has to be so arranged that there shall be a sequence of foodstuffs throughout the year. In many modern farms, no rotation is strictly adhered to; the farmers allow themselves some latitude in the order of their crops.

In regions of low rainfall (20 inches or less) these rotations do not apply, and so far the usual one is the old fallow-wheat-stubble-grazing arrangement. In the dry parts of Canada, however, a tilled crop is being used in place of part of the fallow, and this has the advantage of providing more food for stock.

First Triumph of Science.

With the adoption of the more complicated type of rotation, more animals could be kept, and because in England the animals had to be hand-fed in sheds during much of the winter, more farmyard manure became available. So long as abundant supplies of this material were procurable, farmers could get good crops, but usually supplies were limited. One of the first triumphs of science in agriculture was the discovery of the foods of plants. It was shown as the result of 40 years of painstaking effort by botanists and chemists, that plants take up from the soil nitrogen, phosphorus, potassium, and other elements. Chemists then showed how to make these substances in forms easily applied to the land; these became known as artificial fertilisers. The list includes three groups:—

Nitrogenous.—Sulphate of ammonia, nitrate of soda, cyanamide, and now urea.

Phosphatic. — Superphosphate, basic slag, ground mineral phosphate, and now Di-ammonphos.

Potassic.—Sulphate of potash, muriate of potash.

Making Fertilisers from Air.

In districts where the rainfall exceeds 25 inches, striking increases in yields are often obtained by the use of nitrogenous fertilisers. In British experience, 1 cwt. of sulphate of ammonia an acre may add 4 bushels of wheat, 5 of barley, or 6 of

oats to the yield; it may increase the crop of potatoes by a ton to the acre, or the yield of hay by 25 cwt. All crops benefit. The effect of the nitrogen compound is to increase the rate of growth of the leaf, to make it start growing earlier, and continue longer. So important are these nitrogenous fertilisers that about 30 years ago there was some anxiety as to whether supplies would always be adequate. The technical chemists then achieved a still further triumph; they discovered how to make them from the air, and nowadays they are produced in large quantities from this source. The supplies have therefore become inexhaustible, for in 30 cubic feet of air there is sufficient nitrogen to produce one bushel of wheat.

This industry of making nitrogenous fertilisers from the air has developed to a great extent in England, Germany, Norway, Sweden, and Italy. The largest producer is Germany, and the second largest is England, but the English production is increasing rapidly at present, and the hope is eventually to overtake the German output.

Improvement in Pastures.

So much has the production of nitrogenous fertilisers increased as a result of these scientific developments that the selling organisations have been driven to seek new markets. Considerable quantities of sulphate of ammonia are now sold in China. In Spain large amounts are used in growing Oranges. It is much used in Japan for producing rice; elsewhere it is used for cotton and various other crops. Indeed, in every region where the rainfall is sufficient, nitrogenous fertilisers are likely to be useful. Sulphate of ammonia, with superphosphate and sulphate of potash, is being tried in Europe to intensify the production of milk and meat from pastures. The underlying idea is that young grass is much more nutritious than older grass, hence the herbage is kept almost continuously grazed and never allowed to grow into the flowering stage. For this method of management the fields are divided into small paddocks, which are fertilised in rotation, each one receiving two or three doses of manure during the season. As soon as the grass has begun to grow, sufficient animals are turned in to eat it down; then they are passed into the next paddock, and so on. On a Yorkshire dairy farm run on these lines the number of gallons of milk produced to the acre without the use of fertiliser was 409, whereas under the new system of intensive manuring 713 gallons an acre was obtained, the production being thus nearly doubled. One reason for the improved yield is that the grazing season is lengthened under the new system, beginning in April, whereas under the old it began about the middle of May. The seasons in England are the opposite of those in Australia, which are six months behind, or ahead.

Value of Superphosphate.

In drier regions, however, where the rainfall is less than 20 inches, no such striking results are obtained from nitrogenous fertilisers, but in certain parts of the world marked increases are obtained from superphosphate. Australia furnishes some of the best examples of this, and it is a matter of great pride to experts at Rothamsted that superphosphate was discovered there. It is unnecessary to quote figures. The reports of Roseworthy College, and of many of the experiment stations, and, still more, the experience of farmers, all afford ample proof. The barley plots at Rothamsted tell the same tale. An examination of the plants in detail reveals some of the effects which superphosphate produces. It not only increases the size of the plant, but it alters the plant as well. Within a few weeks of germination, when the leaves are about four or five inches long, a plant without super. has only four or five leaves and only one stem, while a plant which has received super. has many leaves, three or four shoots, and a better root system. At a later stage of growth the plant which had super. is about 10 days ahead of the other. This not only affects the ripening of barley and its value for malting, but enables the plant to withstand better some of the effects of certain pests. In England much serious trouble is caused to the barley-grower by a fly which lays its eggs on the tip of the topmost leaf. When they are hatched the small grubs crawl down the stem until they get into the head, which they then eat. On the plant which has received no superphosphate, the head still remains within the sheath of leaves, and so the grubs get into the head easily, whereas in the other plant the head has shot well out, at the time when the grubs crawl down the leaf; they thus miss the head altogether, and continue right down to the ground, where they ultimately perish.

Lessening Losses from Pests.

One way of avoiding injury from insect and fungus pests is to hasten the development of the plant so that it shall rapidly pass through the stage when the insect or fungus can attack. In all plant diseases two conditions are necessary—the disease agent must be present, and the plant must be in a fit state to be attacked by the disease. Not uncommonly there is a restricted period in which both plant and the agent are ready for producing the trouble. If the plant can be carried over that susceptible period quickly, it has a better chance of escape.

Another important effect of superphosphate shared with certain other artificial fertilisers is to increase the certainty of crop production in an adverse season. In one of the experiments at Rothamsted, Swedes in a bad season, grown without manure, gave a yield of 3.3 tons to the acre. With full manure they yielded 16.3 tons to the acre. Nitrogen and potash were included in the dressing, but the effect of the phosphate itself was to give an increase of 7 tons to the acre—a very striking increase for a poor season. In a good season, however, the effect was not nearly so marked; without any fertiliser the yield was 17 tons to the acre, and with complete fertiliser

20.6 tons—an increase of 3.6 tons, of which the phosphate contributed only 1.5 ton. There is thus a striking difference between the effects in a good season and in a bad one. The effect apparently results from the early start and the additional root growth which the phosphate stimulates. This method of levelling crop production in different seasons is being studied at present at Rothamsted, swedes in a bad season, grown help the farmer a great deal by giving him a greater certainty of crop yield than he has had before.

A further effect of phosphate is to increase the feeding value of crops, especially of pastures, and for that reason phosphates are largely used, not only in England, but in Europe also. It appears to hold equally well in dry and in wet regions. Striking instances are obtained at Cockle Park, in the north of England, in a region somewhat wet, and where evaporation is low; the grass land is poor, an acre carrying only about one sheep, which in England is not considered good. At this station when the grazing land is treated with phosphate—basic slag is generally used—its productiveness goes up, and it can carry more animals to the acre; heavier stocking becomes necessary, or the herbage rapidly deteriorates.

Use of Potassic Fertilisers.

The third group of fertilisers I have mentioned are those that supply potassium, and they have several important effects on the growing plant. One is that they increase the efficiency of the leaf for the absorption of carbon dioxide from the air, and the conversion of it into sugar. A square inch of leaf can in one hour assimilate a certain amount of carbon dioxide, and produce a certain amount of sugar, but if the plant has received potash that square inch becomes more efficient. Excellent illustrations are afforded at Rothamsted by the mangold crop grown for dairy cattle, and valuable because it produces cane sugar. Plants grown with potassic fertilisers have about the same amount of leaf as those grown without, but they are more efficient producers of sugar; they utilise the sunlight to greater advantage, and the additional sugar they make goes into the root and causes it to grow larger. This effect on the leaf is in contrast with that of the nitrogenous fertiliser which increases the leaf area, but not the efficiency to any great extent.

There are certain interesting differences in habit of growth between mangolds receiving potassic fertiliser and those receiving none. The fertilised spread their leaves out, thus catching all the sunlight possible. The others have their leaves bunched up, so that they have less chance to get light; further, they are a dark, unhealthy green in color. Another effect of the potassic fertiliser is to give the plant additional vigor and health. This is well shown by the potato plants at Rothamsted. In a dry season, that is, when there has been about five or six weeks of dry weather, potatoes grown without potash suffer considerably, whereas those plants that receive it continue to grow. In a sunless season potassic fertilisers are particularly useful in improving crop growth. Another effect of this class of manures is to improve the quality of the crop. This is of special value for fruit and potatoes.

The result of these various actions and effects—the nitrogenous fertilisers in increasing the leaf area, the phosphatic fertilisers in hastening leaf and root development, and the potassium in increasing the efficiency of the leaf, and thus improving the productions of sugar and starch—is that the farmer is now able to control his crop to a certain extent, always assuming that there is sufficient rainfall. This kind of control is now being exercised by the farmers of England and the Continent of Europe.

(Republished from Melbourne "Argus.")

(To be continued.)

ADVERTISING INCREASES APPLE CONSUMPTION.

Advertising Apples.—The Skookum Packers' Association, of Wenatchee, Washington, U.S.A., is a co-operative organisation of growers. Particular attention is paid to grading and packing, with the result that a standard brand can be advertised to the trade and the public. The special trade brand is "Skookum," an Indian word, meaning, fine, splendid, excellent. The Skookum Packers' Association makes a special feature of advertising, and an enterprising programme is constantly carried on.

We recently received from the manager of the Skookum Packers' Association, Mr. Harry L. Miller, a handsome transparent design, showing a red and a yellow Apple, with the familiar face of the Indian looking longingly at them. This transparent design is for windows, wind-screens of cars, etc.

The object of the Skookum Packers' Association is to advertise its brand, and so secure highest market prices (as is done with "Sunkist" Oranges). The fruit from the Skookum packing houses is handled by the North-Western Fruit Exchange, a proprietary organisation.

THRIPS AND APHIS.

Research Urgently Needed.

A serious infestation of thrips seemed imminent in Victoria, when severe weather checked this most destructive orchard pest.

Nevertheless, the pest remains in millions in orchards and gardens, and the danger is ever present for a recurrence at the next critical fruit-blossom time.

Growers have directed attention to the fact that Thrips "tabaci" were mentioned in our Nov. issue, whereas it is said the damage is mainly done by Thrips imaginis, an indigenous pest. There is a big field of research awaiting—or rather demanding—attention. The subject of thrips warrants the appointment of a full-time trained entomologist to investigate the life history, discover and breed the parasites which will destroy this fearful pest.

£50,000 Damage by Green Aphis.

Green aphis has destroyed Peaches to the value of at least £50,000, in the Goulburn Valley. Some trees have been so badly infested that they will not recover.

Here again the need is very urgent for investigation. Not to await the onslaught and express regret when it comes, but, with full-hearted determination, to scientifically study the pest in order to control it.

Manuring Fruit Trees.

Maintaining Fertility.

(By J. J. Pascoe.)

(Continued from page 426, November "Fruit World.")

Another well-known grower, as a result of long experience and practical tests, applies 4–5 cwt. superphosphate and 2 cwt. nitrate of soda, sulphate ammonia, or an equivalent amount of blood at similar stages to those selected by the grower whose experiences have been related above. The cost is approximatly £2/15/- per acre. Potash has been tried, but the trees failed to respond. Trefoil and weeds begin to develop in mid-summer; they are encouraged to grow freely, and are ploughed under in late winter. Where crops of Trefoil cannot be produced legumes are resorted to, to supply humus, which is necessary to maintain soil fertility. If a tree or a group of trees is looking unthrifty it may receive a heavier allowance than that indicated; other trees may get a lesser allowance.

Mr. V. R. McNab, Ardmona, also prominent in fruitgrowing organisations, says that the men who grow the heaviest crops manure the heaviest. He applies from 1½ to 2 cwt. superphosphate when sowing Beans or Peas, and 4 cwt. in September-October; later on 2 cwt. nitrogen is distributed; lime is considered to have improved soil texture. All these methods deal with Peaches chiefly; soil a red sandy loam; trees full grown. Cost of manuring approximately £3 per acre.

Non-Irrigated Areas.—At Warragul Mr. C. P. Nobelius deals with red and grey soils, 39½ inch rainfall. The main crop is Apples. The Yates variety gets the best treatment. In ordinary practice, determined after carrying out tests, the manurial allowance is 3 cwt. superphosphate and 1 cwt. potash per acre. Unthrifty trees get more.

Mr. E. Stocks, Drouin, known to produce big crops of Apples on grey soils, applies 3-4 cwt. superphosphate, 2 cwt. potash, and 1 to 2 cwt. sulphate ammonia per acre, according to the crop. In about August superphosphate and potash are broadcasted before ploughing. Rank growths of weeds are ploughed under to maintain supplies of organic matter. Land is not ploughed between mid-January and July.

Mr. J. Ahearn, Pakenham, on sandy loam, five years ago applied 10 cwt. of agricultural lime per acre. Every fifth year he gives each tree 1 cwt. of farmyard manure; ploughs under heavy crops of weeds; from November on cultivates every three weeks; and every year applies in spring 5 cwt. of No. 1 complete manure, containing phosphates, nitrogen and potash. The Department of Agriculture has initiated manurial experiments in his orchard.

Doncaster.—Because they are handy to the metropolitan area, Doncaster orchardists make farmyard material the basis of their manurial system.

Mr. A. F. Thiele grows Peaches, Pears and Lemons, irrigated from dams. From 5 to 10 tons of stable manure per acre are ploughed under in autumn or spring every year. Peaches are the most liberally treated. When considered advisable, 2 cwt. of complete manure is applied in the spring.

Mr. W. A. Webb uses 10-20 tons of farmyard manure per acre. He grows Peaches, Pears and Lemons; heavily bearing trees may get 10 lbs. of superphosphate per tree, and young trees 1-2 lbs. Sulphate of potash is applied at the rate of 2-3 cwt. per acre. During the summer an allowance of 2 cwt. nitrate soda is given. Bone and blood are also used. In every fifth year 10 cwt. of lime per acre is applied. Mr. Webb is constantly experimenting. His trees yield heavily, and look healthy.

Mr. August Thiele applies 10 tons of farmyard manure per acre annually. Last year, for the first time, he tested 3½ cwt. superphosphate, 2 cwt. potash, and 2 cwt. ammonia.

Mr. F. Rieschieck limes his land every three years with 30 cwt. per acre. Citrus trees get 12 tons of farmyard manure per acre, and Peaches 6 tons. Citrus trees also get 4 cwt. superphosphate, 3 cwt. potash, and 2 cwt. ammonia.

Vines.—Practice has determined that the best time to manure is in the winter, to stimulate the vines when blossoming. A 5-ton crop of fresh Grapes removes from the soil 9 lbs. of phosphates, 27 lbs. of potash, 33 lbs. of nitrogen, and 71 lbs. of lime. Under irrigation conditions at Mildura, growers apply to 5 cwt. of superphosphate 1 cwt. of potash, and 1-2 cwt. of nitrogen per acre. Under non-irrigation conditions the superphosphate allowance can be halved. A ton of lime per acre is sometimes used in irrigation districts.

The General Practice.—It will be noted that there is more variation in the quantities of the different plant foods used than in the kinds. With Peaches, etc., in the irrigation districts, superphosphate, nitrogen, and green crops are considered essential; in the Apple and Pear districts the practice is to use superphosphate, nitrogen, Potash, and green crops, and in the mixed fruits district of Doncaster the same three, with liberal dressings of farmyard manure, are applied. In the lastnamed the stage appears to be rapidly approaching when there will not be enough farmyard material to go round, and green manuring is already being adopted to supply organic matter. Orchardists may buy complete manures containing all the combinations deemed to be necessary, or they may buy the different substances separately and apply them as desired.

Editorial Chats

THE OLD YEAR is drawing to a close, and the season of goodwill is with us again, though it seems only the other day we were clasping hands and wishing each other a Merry Christmas.

One wonders why every season of goodwill should not be with us all the time, instead of specially referring to it at Christmas.

* * *

The fruit industry in all its branches is undoubtedly facing problems just now, but that is all the more reason why the spirit of goodwill and earnest seeking after the best methods should prevail.

We are of a conquering race. We are still pioneers in this good country, and the best brains are needed to enable us to properly develop this South Pacific outpost of Empire.

* * *

THERE are widely divergent views among growers as to the best method for developing the citrus industry. All admit the necessity for organisation, but on matters of detail—vital detail—growers are divided.

Now that the contending parties in Victoria have had their say, is it not possible to decide on a united programme?

Mistakes are inevitable in a young country. Wise people learn by mistakes, and then set out to do better.

Men—and organisations—can, as Tennyson suggests:

"Rise on stepping-stones
Of their dead selves to higher things."

* * *

SCIENTIFIC RESEARCH has done much for Australia and New Zealand. More is possible.

With regard to this very big matter of bud selection, Australia would do well to invite that noted plant physiologist, Mr. A. D. Shamel, of California, to come here for six months to lay down a programme based on his lifetime's experience. This country would reap incalculable benefit. We must have science as the basis of industry.

This subject of bud selection affects not only the citrus industry, but deciduous fruit trees as well.

THE important work of reducing varieties has taken definite shape in New South Wales. May the good work spread. We need to get down to an economic basis in standardising varieties—always keeping eyes open to observe or create new varieties of exceptional merit.

It is high time that the Pomological Committee resumed its sessions.

* * *

WHEN is the Australian Conference of Fruitgrowers to meet again? Excellent work was done in the years past when this useful organisation held meetings in the several States.

There is much useful work for an Australian-wide organisation to consider and review. Among other subjects, the Australian fruit grading regulations need revision, according to the considered opinion of several States. This is essentially a work for the growers to undertake.

* * *

AUSTRALIA is a wonderful country, but it needs brains and hard work that it may be soundly developed.

May we all with large faith and earnest endeavor give ourselves to the task for the benefit of this and coming generations.

* * *

CONGRATULATIONS to Uncle Sam on electing Herbert Hoover as President—a big-hearted man with great administrative capacity and wide sympathies.

DATE CULTURE.

Success in Queensland.

Can an Industry be Developed.

Dates in several very fine varieties are bearing well at Roma, Queensland.

Can an industry be developed. Australia's imports of Dates are enormous.

California has now a commercial industry in Date culture. They got some useful varieties from the Mediterranean countries, tested them out, and are now propagating plants to increase their areas under Date culture.

CHRISTOFLEAU'S ELECTRO-CULTURE.

(The Editor, "Fruit World.")

Sir,—

I understand you are inviting correspondence from readers relative to their experiences with the Christofleau electroculture apparatus.

A little over a year ago I purchased one of these outfits and installed same on my orchard at Wahroonga, carrying out all instructions most fairthfully, even to the extent of obtaining the services of a licensed surveyor to give me a true north-south line. Part of the land under which the wire passes is occupied by fruit trees—the balance has been planted with various vegetable crops, such as potatoes, cabbages.

When I installed the apparatus I was more than sceptical, but wished to prove or disprove by practical experience. Up to the present I can truthfully say that I have not seen the slightest difference in any way as a result of this apparatus, and consider I wasted my time and money in erecting same.

Any of your readers who are interested may look at my outfit by arrangement at any time, and I shall be pleased to know of other readers' experiences.

Yours faithfully,
FRED. CHILTON.
City Markets, Sydney, 2/11/28.

PEAR CULTURE.

F.W.H., Yenda, N.S.W., writes:—Please will you tell me the best Pear to use as a polliniser for Packham Triumph Pears? I have them interplanted with W.B.C. and Beurre Bosc (six year old trees), but the Triumph blossom at least a fortnight to three weeks before the others. Can you also tell me the method and best time of top-working the Packhams to other variety. Would it be possible to top-work six year old trees?

Answer (by E. Lawford, Doncaster).—Winter Nelis and Packham's Triumph are very successful as mutual pollinisers. Any variety of Pear may be worked over to any other variety by grafting, irrespective of age, providing the trees are in good condition. If large trees are being operated upon, the whole head may be removed in one cut through the trunk, when the rind graft may be used. But if the branches are to be

grafted the ordinary split and wedge method may be adopted. August is the best time for the latter, but rind grafting may be carried out when the trees are actually breaking out into leaf, providing the scions have been kept dormant.

ETTERSBURG STRAWBERRY.

In reply to a correspondent, Mr. Geo. Wickens, Superintendent of Horticulture, Perth, writes as follows:—

"Melba" is the variety of Strawberry most largely planted in this State. Others are "Phenomenal," "Ettersburg No. 2," and other numbers. A number of other varieties are also grown, but I find it very difficult to know if they are correctly named.

ORANGE EXPORT LOSSES.

Effect of Waterside Strike.

Industrial strife seriously affects our primary industries. Some of the evil effects of the recent waterside strike will be noted in the following letter from the Federal Council of citrus growers in the Melbourne press.

Sir,—The losses that may be suffered by primary producers as the result of labor disputes on the waterfront may be judged by our experience with the "Esperance Bay." This vessel, having loaded a consignment of 3,000 cases of Oranges in Sydney on September 8, and picked up a few hundred cases in Melbourne, was delayed at other ports, and finally left Fremantle on October 8. A cable message appeared yesterday stating:—"Oranges which arrived by the "Esperance Bay" from Australia are being discharged in an unsatisfactory condition, a considerable proportion being wasty or mouldy." The transport of South African Oranges, which are the principal competitors with Australian Oranges in London, does not occupy longer than a month from grove to market. It took a month for the Australian Oranges to get from Sydney to Fremantle. The subsequent voyage to London occupied five weeks. Merchants whose goods are delayed by strikes lose trade which may result in a deferred profit. That is bad enough, but the primary producer may lose, as in the present instance, the article itself, in addition to his cost of transport, which amounts to 10/- or 12/- a case. Unsettled labor conditions in the maritime industry make growers "shy" of export. The result is that Australian markets become oversupplied and prices fall to a level unpayable to the producer. This naturally reacts in many other directions and adds to the depressing outlook of the man on the land, who is substantially producing the real wealth of the country.—Yours, etc.,

B. S. B. COOK.
Secretary, Federal Council of Citrus-growers.

November 15.

HOW BLINDLY WE GROPE.

With the inevitable Apple shortage in Victoria, will there be a glut in Tomatoes?

Who knows?

Growers are planting freely in order to get some returns in place of fruit.

Previously there was a glut of Beans, because of the failure of some other crop.

We now have over-production of canning Peaches and dried fruits.

Other countries conduct market research and forecast the coming crops.

Australia is a long way behind. We just muddle on, and the man on the land takes the knocks.

In U.S.A., the Chambers of Commerce have agricultural sections, bringing the business men into direct touch with rural development.

SHIPPING FRUIT WITHOUT REFRIGERATION.

Quite a lot of publicity has been given by the daily press throughout Australia during the past few weeks regarding a new process for shipping fresh fruit without refrigeration. The method adopted in this invention was published in the May issue of the "Fruit World of Australasia." One Melbourne daily claimed to be the first journal to draw attention to the new method, and suggested that the Government officials should sit up and take notice.

Government officials connected with the Department of Agrficulture, who are readers of the "Fruit World," were quite aware of the new process months ago, as were most people connected with the fruit industry.

When the new invention is applied to larger containers than 20 lb. tins, this journal will again be the first to pass the information on to those who are interested in the fruit export trade of this country.

PEACH ICE-CREAM.

This is one way of using fresh Peaches:—

Peach ice-cream, made by the addition of well-ripened crushed Peaches, is one of the most popular fruit creams in U.S.A. at the present time, and is holding its own with creams made with Strawberry and Pineapple.

The Peaches used are the soft-fleshed, highly flavored varieties, largely grown in California. The pulped fruit is mixed with cream, sugar added, and placed in freezers until required for use.

WAYSIDE FRUIT SALES.

Our Curious Laws.

Any orchardist who sells fruit on Sunday from a stand erected on the road, or in the orchard, is liable to a fine of £10. He cannot be prosecuted for selling from cases, providing he does not habitually occupy the same spot.

We haven't heard of any orchardist thus being prosecuted. Possibly, if he moved a few feet to the right or left, it would satisfy the law and not make a man a criminal for selling healthful fruit on Sunday, to people who want to buy.

. . . .

By means of wayside stalls, fruitgrowers in California profitably sell large quantities of fruit.

BETTER PACKING FOR EXPORT.

Standardised and attractive packing of any merchandise for export in these days of intense competition is a vital necessity. With the object of assisting people connected with the fruit export trade, and more particularly the export of Apples, the Gerrard Wire Tying Machines Pty. Ltd. has issued an attractive booklet that deals with this aspect of the industry in a clear and concise manner.

The booklet is entitled "Better Packing for Export," and deals exhaustively with the standard Apple case and its relationship to better packing. How to pack is fully explained, and a packing chart accompanies the article.

Mr. R. E. Fowler, of Pomponal (Vic.), who was awarded first prize by the Department of Agriculture for export Apples this year, contributes an article on the standard case. An address by Mr. J. M. Ward, Superintendent of Horticulture (Vic.), will be read with interest, and growers will find a fund of other interesting information. Copies may be obtained on application to Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke-street, West Melbourne, C.3.

Bud Selection Saved U.S.A. Citrus Industry.

"Off" Type Fruit Eliminated.

The Same Principle Applies to All Fruits.

How Australia Can Profit by Experience.

(By R. E. Boardman, A.F.I.A., F.A.I.S.)

(Republished from the Melbourne "Herald.")

SCIENTIFIC RESEARCH saved the citrus industry of California, and the Pineapple and sugar industries of Hawaii. Orange groves, once valueless, have been made to bear heavily with choice fruit by the simple process of bud selection.

The same principle is now being applied to all varieties of fruit with wonderful results. The method is known in Australia. Enlightened public opinion will make it effective.

Here are four outstanding principles growers on the U.S.A. Pacific coast are irrevocably committed:—

(1) Scientific research.
(2) Organisation.
(3) Standardisation.
(4) Advertising.

In the matter of scientific research, a full programme is being conducted by the Universities, the Federal and State Governments, the various county authorities, and by fruitgrowers' and other organisations.

Scientists have now demonstrated that it is possible to make two Oranges grow where one grew before, and the same principle is now being adopted with Peaches, Pears, Apples, Prunes, Pineapples, Bananas—in fact, the whole range of fruit production. And what a splendid achievement to have found the method of doubling, or at least substantially increasing, the crops at no extra cost! And with increased production there has come better quality and more even-sized fruit.

This is the most outstanding achievement, and it is here where Australia must take the lesson to heart. That organisation and orderly marketing are vital is freely acknowledged. But it is imperative to have the quality and quantity of goods on which to build up a market.

Returns Increased by 70 Per cent.

Here is an Orange grove. A few years ago the grower was just making a living with a normal crop, and bordering on the marginal line when crops were light. Now, the same owner, with only the same expenses as before, has had his returns increased by 70 per cent., and is contented and prosperous.

Yet there is nothing essentially revolutionary about the methods employed. They follow along normal, scientific and practical lines, and have been demonstrated on favorably in innumerable instances.

What is the secret? It is bud selection. This method is being preached by Australian scientists and horticulturists, but needs the intelligent application by the growers to make it completely effective. Until recently the work on crop improvement through bud selection was confined to Oranges, and the results were truly remarkable. Now the field has been widened to include crop improvement with all fruits. The success which has attended the application of this principle in Australia indicates that it is only a matter of the correct emphasis to have the whole field fully covered.

Bud selection is only one phase of fruit production: there are other equally important aspects, such as stocks, soils, and cultural treatment.

Just now, however, growers and scientists in Australia are giving close attention to the subject of bud selection. Hence these references.

Mr. A. D. Shamel's Researches.

Mr. A. D. Shamel is one of the plant physiologists of the United States Department of Agriculture. His headquarters are at Riverside, Southern California, a place made famous by the fact that here is still standing the original Washington navel Orange from which a world-wide industry has sprung; and later by the establishment of a citrus experiment station. Hither come students and interested folk from all parts of the world. Here were trained men from Australia after the war, and they left behind them a reputation of which Australia can be proud.

Here is one specific instance which I investigated. A man planted an orchard with Washington Navel Oranges, paying, of course, all the costs of preparation and of bringing the orchard into bearing. When the trees started to bear fruit, great was the disappointment to find that the fruit was thick-skinned, puffy, and unsaleable. The trees were certainly of the Washington Navel variety, but the fruit was utterly inferior. All cultural methods were overhauled, experts were called in, and chemists analysed the soil. Nothing availed.

The man was facing ruin. At last Shamel was consulted. Tracing back the trees to their origin, he was able to locate the tree from which the buds were taken that formed the inferior type. Sure enough, the same poor Oranges were on the trees from which the original buds were taken.

What was the remedy? Certainly not the destruction of the orchard and re-planting with the true type. It was just this—the cutting off of the inferior type branches and inserting buds from proved bearing trees—buds tested by the Fruitgrowers' Exchange. The change was magical. In due time every tree bore splendid crops of excellent fruit, and to-day this orchard is one of the most productive and profitable.

Stigma on Australia Removed.

And incidentally Shamel has done this. He has removed the stigma on Australia for having introduced an inferior variety, known as the "Australian" Navel Orange. Up till a few years ago, growers would point to this poor type and say: "This is the Australian Navel Orange." Shamel has disproved this, showing it to be just an "off" type Navel, and cleared our name in the eyes of the world. We owe him a debt of gratitude.

Here is the principle. By using buds from proved bearing branches, the good bearing qualities of the prolific limbs can be transmitted.

There is this negative truth, too. By using buds promiscuously or from inferior branches, the same faults will be transmitted.

When a home gardener or commercial fruitgrower buys a Jonthan Apple tree, or a Washington Navel Orange, or, say, a Chatenay Rose, it simply means that he is getting an ordinary stock tree or shrub into which the variety has been introduced by means of a bud. The tree or shrubs develops from the inserted bud. Thus, a Washington Navel Orange bud. inserted in a seedling stock, becomes a Washington Navel tree for all time (unless re-budded). That tiny inserted bud determines its character.

Shamel went one step farther. He proved that there was an infinite variety of types of the Washington Navel Orange. The inferior of degenerate types were prolific. The true types were much less prolific, and needed selection.

So important has this work of selection become, that the California Fruitgrowers' Exchange, the largest organisation of its kind in the world, and the model of successful co-operative enterprise, has now a special department for collecting and distributing buds, and to date over four million selected buds have been distributed.

Success with Other Fruits.

Now comes a new phase of the story. That the same principle applied to other fruits was at first received with incredulity until practical results demonstrated that the same natural principles were in operation. Now Mr. Shamel's services are besought for crop improvement. In Hawaii, Pineapples and sugar-cane; Florida, citrus; Jamaica and Honduras, Bananas; and in other places, near and far, for work on Apples, Peaches, Prunes and other fruits.

The principles have now been established, and the growers themselves, having seen its importance, can do the work locally through their organisations. All the costs are met by making a small charge for the buds.

Here is another sidelight. The growth of the Pineapple industry in Hawaii is a romance. Fifteen years ago there was a small acreage planted. In 1927, nine million cases (two dozen tins a case) were exported, to the value of £7,000,000. But what the industry owes to Shamel is now filtering through to the rest of the world. After the industry had been established for a few years, the principal variety (known as the Smooth Cayenne) began to "run out." Grossly inferior types appeared, as with the Orange grove previously referred to. The Pineapple industry faced extinction. The United States Department was consulted, and Shamel was sent over. The fault did not lie with the soil, the climate, or any other condition. The growers were simply propagating from an inferior type of plant. Shamel searched, and found some plants bearing the original large cylindrical high-quality fruit, and by propagating with these alone the industry was reconstituted.

IMPORTANCE OF BUD SELECTION.

The Wonderful Advances Made in Bud Selection of Citrus, are being Repeated with Deciduous Fruit Trees.

Pineapples and Bananas Have Also Been Improved.

Mr. A. D. Shamel, the world-famous plant physiologist of the U.S.A. Department of Agriculture, replying to a leter from the "Fruit World," wrote, on August 4, as follows:—

While bud selection is only one of the important factors in fruitgrowing, it is becoming more and more evident that it is of fundamental importance. The work of our Department in the citrus, the Smooth Cayenne Pineapple of Hawaii, the Peach, the Prune, and the Pear, has demonstrated that systematic selection of plant propagating material in fruit varieties leads to improved production, both as regards quantity and quality of fruit.

I am planning on leaving here the latter part of this month for three or four months of study of the **Pineapple and Grapefruit** industries of Porto Rico for the Porto Rican Department of Agriculture. This work will be in the nature of a survey of these industries in Porto Rico leading to the inauguration of systematic work by that Department in bud selection and improved plant production practices. Arrangements have been made to employ one or more men in this work in Porto Rico by the Porto Rican Department of Agriculture as soon as our survey and recommendations have been completed.

It gives me a great deal of pleasure to tell you that in our **Peach** work we now have as much striking bud selection material as we had in the Navel Orange, when the first Navel Orange plantings were made.

There is no question in my mind but that bud selection will be found to be as important in the deciduous as has been the case with the citrus fruits, both from the commercial and scientific points of view.

VALUABLE NEW ORANGE.

Discovered at Porto Rico.

In a later letter, dated October 17, Mr. Shamel writes:—

Your letters of September 12 reached me on my return from Porto Rico.

While in Porto Rico I was fortunate enough to find an

outstanding Orange tree

bearing seedless fruits with ideal commercial characteristics of time of maturity, size, shape and eating qualities.

This is one of the many thousand seedling trees that were examined.

It illustrates to mind the importance of careful and systematic individual tree studies, as a basis for obtaining improved strains and varieties for commercial use.

Such work is one of the fundamentally important steps in founding and developing a commercial citrus industry.

The British Government recently allocated £1,000,000 to the Empire Marketing Board, for propaganda and research work.

NEWS IN BRIEF.

Banana experiment stations have been established in Northern and Southern Queensland.

Plant research stations are needed over our wide Commonwealth.

The Government Nursery, in Queensland, is being closed down shortly.

Queensland possesses a plant quarantine station, where varieties of plants, otherwise prohibited, can be safely grown under observation for distribution when proved clean.

Other States urgently need similar plant quarantine stations.

The deadly Banana "bunchy-top" disease is being steadily reduced, and much Banana planting is going on in Queensland.

Six new varieties of Bananas, and an important parasite to assist in pest control, have been brought to Queensland from Java by Mr. F. L. Froggatt, Government entomologist. The Banana plants will be grown in quarantine.

PERSONAL.

Mr. P. Malloch, Manager of Irymple Packing Pty. Ltd., and a member of the Board of Management of the A.D.F.A., is visiting Canada and California after the 1929 harvest. He is keenly interested in the organising of the dried fruits industry, and the main object of his visit is to study the organisation in Cailfornia. He will also study growing and packing practices in comparison with Australian methods.

South Australian Fruit Crop Estimates.

Compiled by Geo. Quinn, Chief Horticultural Instructor and Inspector, November 13.

Apples.—As was anticipated after the abnormal yields of the past 1927 season, the Apple trees, though blossoming fairly well, have now proved to present a low setting of fruit. In the warmer districts north of Adelaide, where the Cleopatra predominates, about 45 per cent. of an average yield is anticipated. In the Mount Lofty Ranges, where Jonathan, Rome Beauty, and other colored sorts—including many trees of non-exportable varieties—the average will be about the same, but the first-named sort is extremely light. In the southern districts about 30 per cent. of a normal yield is anticipated, and in the south-east, not more than 40 per cent. of the usual crop is expected, and these will consist largely of sorts not usually exported overseas.

Pears range from an average show north of Adelaide to about 25 per cent. of normal in the south-east. The early promise was very good, but now, owing to severe shedding, the average yield for the State is not expected to exceed 60 per cent. of an ordinary crop.

Plums and **Prunes** are expected to yield a full average crop.

Cherries promised well, but shot-hole fungi and rough winds have reduced the crop to about 70 per cent. of a normal yield. The black aphis is not much in evidence yet on these trees.

Figs promise a normal yield.

Apricots in the principal districts are heavy and promise, in the aggregate, to exceed a normal crop by about 20 per cent.

Peaches and **Nectarines** vary from normal to poor. The average will range around a 70 per cent. crop. The principal cause of this reduction has been the severe attacks of green Peach aphis upon most sorts in many localities.

Quinces show well for an average crop.

Lemons also promise to reach an average yield, and

Oranges of the Washington Navel variety likewise, but the worst shedding of young fruits has yet to come from these latter. **Mandarins** are poor, and it is doubtful if half a normal crop will be harvested.

Almonds set a phenomenal crop. This was probably owing to the mild warm weather experienced during August, when most sorts were in bloom. Heavy winds during October reduced the nuts, but still a good normal average yield is expected to reach maturity.

Walnuts, though grown somewhat sparsely in this State, and decimated by bacteriosis, the promise is for a fair average crop of nuts.

Berry Fruits.—These include Strawberries, Red and Black Currants, Gooseberries, and Raspberries. The anticipation is for about 80 per cent. of a normal crop in most of these. Generally, the yield of these fruits does not exceed local requirements.

Viticulture.—In the vineyards, Grape vines, on the whole, are looking well, notwithstanding the poor winter and heavy winds in spring. The heavy October rains, however, very materially enhanced their chances for the coming season.

In the Murray Valley, under irrigation, the promise is for a heavy Sultana crop—probably 10 to 20 per cent. above normal at present. The Zante Currants also promise a full average yield, whilst the Gordo (Muscats) appear to be carrying flower bunches capable of exceeding the normal crop by probably 10 per cent. These results indicate a strong recovery from the severe freezing experienced in these areas a year ago, and will show what Grape vines are capable of doing when to all outward evidences the chances of obtaining sufficient good fruiting wood to produce a normal crop seemed almost hopeless. The Doradillos are from fair to light, promising approximately 80 per cent. of a normal crop.

In the coastal areas, where dependence is placed on seasonal rainfall, the Currants are showing for a yield reported to be 20 per cent. above normal. All other prominent wine Grapes are looking well and carrying flower bunches equivalent to a good average yield, providing nothing occurs to seriously reduce the setting of the berries. Mid-summer rains will be necessary to fill them out to a normal size, as there is an insufficient reserve of moisture in the subsoil at present.

SOUTH AUSTRALIA.

Nuriootpa (20/11/28).

Mr. A. B. Robin writes:—The principal fruits grown in this district are Apples, Pears, Apricots, Peaches, Prunes, and Plums.

On a smaller scale, the following are also grown successfully:—Citrus fruit, Almonds, Figs, and Currants, but the latter are mostly sold to the distilleries.

The crop prospects are so follows:—Apricots, good; Prunes and Plums, good; Pears, patchy, medium to light; Peaches, light; Apples, very light.

A plague of green aphis is responsible for the failure of the Peach crop, cling varieties and Nectarines appear to have suffered most. Spraying has not been effective.

Offer to Purchase Fruit for Export.

The general manager of the Government Produce Department (Mr. G. A. W. Pope), has received a cable from the Trade Commissioner for South Australia, in London (Mr. R. M. K. Lewis), stating that he has received an offer from a Continental firm, offering to purchase 3,000 cases Dunn's Seedling Apples, at 10/- per case, f.o.b. Port Adelaide.

The fruit is to be specially selected and not to contain more than 10 per cent. of 3 inch fruit.

It is impossible for the Department to enter into contracts at the present time for the reason that growers, generally, are reporting that their crops of Apples are very light indeed, and the prospects of having an export surplus are not favorable.

Should, however, any grower care to participate in this particular sale, he is invited to communicate with the Department at once, as the business must be speedily completed.

Mr. Lewis further reports that the prospective prices of the 1929 markets are very similar to those ruling last year, and, although the Australian export will be lighter, there will be larger quantities of American Apples available, so the supply, as a whole, will be practically identical with last year.

Last year's buyers of this department's "P.E.D." brand of Apples are very anxious to retain the connection then established, and the above offer is an indication of their desire to again do business this year.

Balhannah.

The chief fruit crops in this district, writes Mr. H. N. Wicks, are Apples, Pears, Plums and Prunes. The spring has been remarkably cool, and black spot has been bad in some parts of the district. The crop prospects are very poor in comparison with last year's good crops. Apples will be particularly light, and Pears medium. Plums and Prunes, however, give every indication of producing heavy crops.

Apple and Pear Grading Regulations.

N.S.W. Fruitgrowers' Federation Seeks Amendment.

The Editor, "Fruit World," Box 1944, G.P.O., Melbourne.

Dear Sir,—The marketing of the Commonwealth's record Apple and Pear crop last season has again brought under notice the necessity for certain amendments being made to the existing Apple and Pear grading regulations.

The amendments suggested herein apply to both the Commonwealth export regulations and the State regulations governing the domestic market, as both sets of regulations are identical in so far as they are affected by these proposals.

The Federation is firmly of the opinion that the existing regulations are to a degree unworkable, and therefore result in confusion, not only to growers, but to inspectors and buyers.

Briefly, the requirements of grading regulations should be:—

(a) That each grade contains fruit of one quality, allowing, of course, a slight margin for errors which might be called "tolerance."

(b) That the regulations are of such a character that they lend themselves to quick and efficient shed grading of the entire crop.

(c) That an inspector can tell definitely and quickly whether a consignment is graded as marked.

(d) That an inspection at any port or market by inspectors who have never been in personal touch would yield uniform results.

The existing regulations do not comply with these essential features, the grades are not grades at all, but are "blends," as the second grade is practically the same as the first grade, with the exception that a larger proportion of marked fruit is allowed, whereas strict grading should mean that the second grade would consist of fruit 100 per cent. of which is of an inferior quality to the grade above. For instance, "standard" grade, by allowing 10 per cent. of fruit with certain defined blemishes, means that the balance, namely, 90 per cent., must be unblemished, and therefore of such quality as to enable it to be packed in the "special" grade. Surely true grading should allow all unblemished fruit to go into the top grade, and not as at present, for a lower grade is to be carrying a portion of fruit which should be in the top grade.

It is therefore considered to be commercially impossible to pack in grades under these regulations, and it must be just as impossible to inspect and definitely pass or reject consignments, as it merely leaves inspectors to interpret the regulations according to their own views, with the result that different inspectors act differently, and thus defeat the whole aim and objects of grading regulations, which is standardisation.

The growers of New South Wales are vitally interested in questions affecting the marketing of Apples and Pears, as the production of this class of fruit in this State has now reached a substantial figure, and there is a considerable area of new plantings coming into bearing. In addition, also, the best market in the Southern Hemisphere is in Sydney, and this market in the past has absorbed from the southern States a large quantity of fruit below exportable standards, and in order to ensure that the marketing is placed on a sound basis, it is absolutely imperative to commence with workable grading regulations.

It is considered that the regulations can be made quite suitable by a very slight amendment to the "standard" grade. If the "standard" grade is amended by the elimination of the subparagraph (i.), which allows 10 per cent (by number) of the fruit to be blemished, the effect of this would be that the "standard" grade would allow 100 per cent. of its fruit being of a lesser quality than the "special," as every fruit in this grade would be allowed to carry blemishes, the total area of which would not exceed ¼ inch. A further provision might then be made in this grade similar to that in the "special" grade under which 5 per cent. (by number) might be allowed to carry a little additional blemish.

The provision under both the "special" and "standard" grades, allowing 5 per cent. (by number) being slightly inferior to the balance of the fruit in the grade, is a provision which in the United States regulations is called "tolerance," and is, in fact, a provision for the human error in grading.

Repeated attempts have been made during the last four years by this State to have the existing regulations reviewed in accordance with the suggestions contained herein, but owing to opposition from the southern States the matter has not received the consideration which its importance should ensure. No sound arguments have been put forward by those in opposition to these suggested amendments, in spite of which the voice of this State remains unheard, but, as New South Wales consumes such a large proportion of the crop from the southern States, it is extremely difficult to understand why the viewpoint of New South Wales should not receive more consideration.

Yours faithfully,
E. E. Herrod, Secretary.
Fruitgrowers' Federation of N.S.W.

Spotted Cherries.

In the Orange and Young (N.S.W.) districts the black Cherry crop was so badly attacked by aphis that the fruit had the appearance of Strawberries, so thickly was the aphis clustered on the ripening fruit.

Parramatta.

In the Central Cumberland district citrus trees have bloomed exceptionally well, and there is every indication of a big crop. There is still a fair proportion of Late Valencia and Commons to be harvested. Black spot has caused damage in some orchards.

Another Neglected Market.

An Australian, writing from Penang (Malaya) to the Sydney "Bulletin," complains that tinned fruits and jam from Australia cannot be purchased in Malaya, although there are plenty of both, from England and America.

Egg Marketing Board.

Messrs. A. G. Crooke (Tahmoor), C. Judson (Thornleigh), and G. N. Mann (Dundas), have been elected to represent N.S.W. producers on the Egg Marketing Board. There were 15 candidates.

New South Wales

Seasonable Notes .·. District News

CODLIN MOTH.

Time for the Third Spraying.

As the regulations under the N.S.W. Plant Diseases Act, 1924, require the second spraying for codlin moth to be completed by November 20 each year, and the third spraying to be commenced three weeks from the commencement of the second, growers are reminded to keep the time for commencement of the third spraying in mind (writes the N.S.W. Department of Agriculture). These regulations are based on scientific methods of control, and growers should carry out the spraying operations in the most efficient manner possible, remembering that the task is being performed not merely to keep within the law, but to destroy the pest.

In spraying Apple, Pear, and Quince trees for codlin moth control, the spray nozzle should be directed over all parts of the trees, and care should be taken to ensure that each individual fruit receives a coating of lead arsenate. Be sure to provide a hose long enough to treat thoroughly even the largest of the trees.

Bandaging.

It is also prescribed by the above-mentioned regulations that all Apple, Pear, and Quince trees should be bandaged as from November 15 until not earlier than June 1, nor later than July 31 in the following year, and that all larvae and pupae within or under these bandages shall be destroyed at intervals not exceeding fourteen days between November 15 and February 21, as well as at time of removing the bandages.

The bandage must be of wheat sacking of a weight of not less than 15 oz. per yard of 26½ inch width, each bandage being not less than 8 inches wide, and folded once, with the opening of the fold facing downwards. The bandage must be clear of the ground at its lower edge. When more than one limb of a tree arises from the ground, or when a limb arises from a main trunk less than 5 inches from the ground, each such limb must be bandaged in the manner above prescribed.

Some Further Reminders.

All Apple, Pear, and Quince trees must be kept free from loose bark and broken limbs, and all crevices or cavities in such trees are to be kept free from the larvae and pupae of the codlin moth. All such larvae, pupae, and litter arising from the removal of the loose bark and broken limbs and from the cleaning of the crevices and cavities must be destroyed by burning. Fallen fruit in infested orchards must be collected and removed at intervals not exceeding three days, and destroyed by boiling for ten minutes, by burning, or by placing in a suitably covered pit.

APHIS DAMAGE OVER-ESTIMATED.

The damage done by green aphis to Peaches in the N.S.W. fruit districts has been largely over-estimated, and a survey by officers of the entomology branch has proved that losses can be reduced by half (some of the first estimates were given at 90 per cent.).

In the Yanco area the loss will be 40 per cent. and Mirrool 30 per cent. Losses were largest where winter spray was omitted, and spring spraying was left too late.

PARASITE INVESTIGATION.

Mr. William Gurney, New South Wales Government Entomologist, recently arrived in London from America, where he investigated the methods of controlling codlin moth, and the use of washing machines for removing arsenical spray residue from fruit, which could be adopted with advantage in Australia.

While in Hawaii, Mr. Gurney endeavored to get some of the parasites used for controlling the fruit fly. He arranged for the despatch of some of the parasites to Sydney in 1929.

The effectiveness of the research bureaus in America and Britain surprised Mr. Gurney. He considers that in many respects America leads, because of the splendid endowment of research. In this respect America offers an example that Australia would do well to follow.

Aphis Checked.

Ladybirds, Hoverflies, and other predatory insects are reported to be increasing in affected areas of N.S.W., and aphis infestation is now at a standstill.

PEAR AND CHERRY SLUG.

How to Control the Pest.

Cherry and Pear growers on the northern and southern tablelands, and also growers in the Orange district and other Cherry-growing centres, are warned as to the possibility of further attacks this season by the above-mentioned pest, states the N.S.W. Department of Agriculture. Although Pears and Cherries are the chief hosts of this slug, Plum and Quince trees are also attacked.

Although this pest regularly does damage it is easily controlled. The Acting Entomologist of the N.S.W. Department of Agriculture advises growers to spray with arsenate of lead powder 1 lb. to 40 gallons of water. This will kill the slugs. The spray should be applied as soon as the first signs of the slugs are noticed, except when the fruit is ripening, at which time it is inadvisable to spray. An application of the spray after the fruit is harvested will destroy the majority of the second brood slugs and thus reduce the infestation the following season.

The adult insect is a small black saw-fly about one-third of an inch in length. The eggs are laid in small slits made in the surface of the leaf and hatch in from one to two weeks. The minute larvae at once begin to feed upon the upper surface of the leaves, soon destroying them, and sometimes defoliating the tree. They are olive-green in color, and owing to a covering of slime-like material have the appearance of slugs. When full grown they are about half an inch long, and they pupate in the soil beneath the tree. Two broods normally occur during the year, but the second, which occurs during December and January is the most extensive.

Candid Comment.

"If some one will come forward with proposals to form another body that will do more, we will be glad to make representations to the Minister to have them put into effect." This is what the Chairman of the Fruit Marketing Conference said in Sydney recently, when referring to the reports, that growers' representatives were not satisfied with the work of the F.M.C.

Mr. E. E. Herrod, Secretary of the Fruitgrowers' Federation, assured the Chairman that his organisation would be sorry if the F.M.C. ceased to function.

Reducing Fruit Tree Varieties.

Important Work in New South Wales.

ONE of the most valuable movements for many years was practically finalised last week in Sydney, when a representative committee met to consider the question of reduction of varieties in fruit trees.

The prime mover was Mr. C. G. Savage, the Government Fruit Expert, while he was ably supported by Mr. R. J. Benton (Citrus Expert), and representatives from the Fruitgrowers and Nurserymen's Associations. After preliminary correspondence, the initial meeting was fixed for the 15th November. A full attendance, after deliberating on the hundreds of varieties, unanimously agreed on cleaning up goodly numbers. Some were retained by reason of peculiar adaptability to certain climates, while others were referred back to growers for further information.

A list of approved varieties will be widely published as recommended by the Department, and new orchardists will be able to avoid many mistakes by adopting the recommendations made in their interests.

As stock of many sorts have already been worked, the new arrangement will not operate until season 1930. This means that the nurserymen work a reduced list in the budding season, 1929, and publish the Government's recommendations in their catalogues for the 1930 planting.

This innovation, long overdue, will materially benefit both nurserymen and orchardists. The nurseryman, because his left over stocks will be reduced in number, and the orchardist because attractive names for inferior fruits will not lead him astray.

Associated with this question, is the fact that some varieties carry more than one name, and a standardising of names is also operating. Instances like Fameuse, Fanny and Lady in Snow, all referring to the Apple first named, and William's Bon Cretien and Bartlett for the one Pear, are receiving attention, and much advantage as a consequence is assured.

Mr. C. E. Vessey rendered signal service for the nurserymen by collecting marked catalogues from all leading growers indicating the varieties each was willing to drop. Where unanimity was evidenced, the variety was marked out at once. This saved a considerable amount of time, and the thanks of all growers are accorded Mr. Vessey for his work in this respect.

The tone of the meeting was one of cordial friendliness, and augers well for future meetings of a similar nature.

When all is said and done, everything is to be gained by dropping mediocre and inferior sorts, and taking planters into full confidence in the matter of selection.

Lavington (Albury) District.

The principal fruits grown in this area are:—Peaches (planted extensively in order to catch Sydney market at Christmas time), Apples, Pears, Prunes, Plums and Grapes, writes Mr. J. Buchhorn, of Laving-N.S.W.

There is a heavy crop of Peaches, but Apples are light, owing to abnormal crop last year. Some varieties are a total failure. Pears are bearing heavy with exception of late varieties, some of which will be a failure. There will be a fair crop of Prunes, and heavy crops of Grapes and Plums.

The following table covers the varieties and prospective yields:—

Peaches—Briggs and High's Early Canada: exceptionally heavy. Hale's early: heavy.

Apples—Jonathan: very light to fair. Granny Smith: fair to good. Romes: Good. Dunn's: Fair to good. Other varieties: a failure.

Pears—W.B.C.: very good. Packhams: best crop seen in district. B. Bosc: very good. Late varieties: excepting Josephine, almost a total failure.

Prunes—D'Agen: good to heavy. Robes: fair. Angelina: good.

Plums—Japs: all varieties very heavy. English: fair to good.

Grapes — Waltham Cross: very good. Black Muscat: very good. Other table varieties: good. Wine grapes are exceptionally heavy. There are a few isolated cases of frost damage, caused early in November.

Stone fruit is setting well at Goulburn (N.S.W.), and record crops are expected.

Orange.

There will be an average fruit crop in the Orange district. Plums are a little light in places, but as large quantities of this is grown here, the shortage will hardly be noticed. Early Lyons Cherries are light, but later varieties are good. Most varieties of Pears are heavy, Williams will be on the light side. Apples are good, and Grapes, Apricots, Peaches, and Nectarines show excellent prospects.

At a meeting of fruitgrowers at Windsor (N.S.W.) recently, it was decided to form the Hawkesbury District Citrus Association. Committee selected were:—Messrs. F. R. Cutts (Colo), S. A. Tuckerman (Ebenezer), R. Lowe (Lower Portland), A. Krahe (Wilberforce), A. Wimble (Maraylya), and A. Dunstan (Sackville).

Mr. E. E. Herrod, Secretary of the N.S.W. Fruitgrowers' Federation, reporting on the retention of the street barrow trade, stated that the question had not been satisfactorily settled. No stands had been removed, and roving barrowmen were operating without hindrance.

A N.S.W. grower complains that Joppa and Valencia Oranges are being sold in Sydney shops as "choice Washington Navels."

During Health Week in Sydney last month, the Fruitgrowers' Federation had an imposing display of fresh, dried, and bottled fruits in the Sydney Town Hall. Fruit was sold in small cartons, and fruit drinks were a popular and profitable feature.

New A.D.F.A. District Council.

A Murrumbidgee District Council of the A.D.F.A. has been formed at Yenda, N.S.W. The council embraces Yenda, Yanco and Griffith. Mr. S. Broome was elected President of the new council.

Plant physiology is among the subjects embodied in the seven research scholarships (each valued at £300) to be made available shortly by the trustees of the Science and Industry Endowment Fund in N.S.W.

There is every indication of a heavy crop of citrus next season in the Upper Hawkesbury (N.S.W.) district. In Lower Hawkesbury, indications are not so promising.

Tenterfield (21/11/28).

Mr. Peter Sommerlad reports as follows:—

Acreage about equally divided between Apples, Cherries and Peaches (Pears and Plums to a lesser extent).

In Apples, the most favored varieties are Granny Smith, Democrat and Jonathan, Granny predominates among the newer orchards.

In Cherries, the early varieties are favored, such as Werders' E. Black, Precoce, Burgdorff's Seedling, and E. Lyons.

In Peaches, from the earliest to the latest are grown, such as Hales, High's E. Canada, King Edward, Sneyd, Elberta, Blackburn, and McDevitt's Late Red.

Crop prospects for coming season are generally speaking, light in Apples, Granny Smith particularly so. Pears good; Peaches heavy; Plums very light, particularly in English varieties; Apricots medium; Cherries were medium crop.

The crops are infinitely lighter than last year, with the exception of Peaches, Apricots and Quinces.

The fruitgrowers here have linked up with the Fruitgrowers' Federation, formed a sectional committee in connection with the Chamber of commerce.

The early Cherries were marketed ten days earlier than ever known before, due to a very mild August. First consignment, October 10.

Tallong District.

Mr. H. P. Davenport, of Tallong, N.S.W., reports, under date November 19, 1928: Apples and Pears are principally grown; about 350 acres.

The prospects point to about a half of a full crop, both Apples and Pears. Last year was a full crop, so about a half of that is what is expected this year.

H. V. McKay's Catalogue.—From H. V. McKay Pty. Ltd. we have received a copy of their 1929 catalogue, an artistically arranged book of 96 pages, printed on fine art paper, with lavish illustrations in color of the various machines and implements comprising the Sunshine line. The book is fully descriptive of this company's manufactures, and contains much information of value to the man on the land. A copy will be posted free to any interested person, upon application to H. V. McKay Pty. Ltd., Sunshine Harvester Works, Sunshine, Vic.

Fruitgrowing in Otago, New Zealand

(By L. C. Tonkin.)

Otago, which is New Zealand's southern province, has in its interior a considerable area—some 5,000 acres—of orchards. These are mostly situated throughout the length of the Clutha River Valley, which is similar to the Columbia River in N.W. America, except that the cultivated lands adjourning the American River contain hundreds of acres of fruit trees—Hood River and Wenatchee; while in Otago small areas only are available, where sometimes an individual orchard is placed, or sometimes a little township as Roxburgh or Alexandra is formed. Apricots and Peaches, extensively grown in Roxburgh district (known sometimes as Teviot) and northwards, are of fine flavor and appearance, and are favorably known throughout the consuming centres of New Zealand. Crop prospects of these two fruits are very good.

South of Roxburgh is the Apple country, where there is an annual export of 80,000 cases of Apples, which, by reason of the cool autumn, possess high quality and because of their later-maturing (compared with Nelson, or still northern-grown) obtain satisfactory prices.

Packing is done in individual sheds, but there is a singular lack of cool storage accommodation in Otago. Corrugated cardboards are to be used to cover the whole inside of the case of the higher-priced varieties. This is the practice in Hood River, U.S.A., export, and one million cases are being so done this 1928 season.

Imported timber from Canada is still being used throughout New Zealand, but as far as Otago is concerned there should soon be available pinus insignis for case timber, as the Dunedin City Corporation, foresightedly, planted thousands of acres years ago.

The varieties of Apples include the Australian favorites—Sturmer, Jonathan, Delicious, Dunn's and Cox's, while Cleopatra and Newtown, which are usually not grown elsewhere in New Zealand, do well in Otago.

Estimate for 1929 export, 60,000 cases.

The Apple-growers have mostly American graders, while the stone fruit men support the Australian graders. City business men own the Apple orchards, which are worked by the sons, which means that a certain amount of city progressiveness is put into the industry. The stone fruit growers, being formerly gold miners, and sons of gold-digging pioneers, are of a more phlegmatic type.

Otago is the only province in New Zealand not under the Fruit Control Board, and consequently has to act independently with its F.O.B. sales, shipping arrangements, and nomination of English brokers.

NEW ZEALAND FRUIT EXPORTS.

New Zealand has established a record by the shipment of more than 1,000,000 cases of fruit during 1928. The growth of New Zealand's overseas fruit trade can be seen in the following figures:—1908, 1,236 cases exported; 1912, 14,869 cases; 1916, 19,264 cases; 1920, 34,585 cases; 1924, 243,429 cases; 1928, 1,018,000 cases. The quantity of fruit exported from the Dominion this season totalled 1,018,027 packages, 963,780 cases of Apples, and 54,247 crates of Pears. All the fruit was exported to the United Kingdom, with the exception of 60,372 cases of Apples and 300 crates of Pears to Montevideo, 23,753 cases of Apples for Rio de Janeiro, and 10,921 cases of Apples for Montreal.

N.Z. HIGH COMMISSIONER VISITS LIVERPOOL.

Sir James Parr, High Commissioner for New Zealand, recently visited the docks at Liverpool at the invitation of the Mersey Docks and Harbor Board.

Sir James was much impressed with the facilities for handling overseas produce, and certain new features which were presented to him by his hosts, may induce him to impress upon N.Z. shippers, the importance of Liverpool as a port for their produce.

A valuable new seedless Orange has been discovered at Porto Rico by Mr. A. D. Shamel, the well-known plant physiologist of the U.S.A. Department of Agriculture.

A definite move has been made in N.S.W. to reduce varieties of fruit trees. The Department of Agriculture is co-operating with fruitgrowers and nurserymen.

Citrus packing regulations have been issued by the Victorian Department of Agriculture, mainly for the purpose of preventing the sale of dry and immature Oranges.

Dr. G. E. Payne Philpots, President of the Food Education Society of Victoria, recently visited Mildura at the invitation of "Sunraysia Daily," to lecture during Health Week.

Great appreciation was expressed by the public for the good, sound health advice given.

Dr. Philpots said he was greatly impressed with what had been accomplished in the district, which was a credit, not only to Victoria, but to all Australia. It was now only up to the great mass of people to consume more fruit, and thus help the primary producer, who was the backbone of Australia.

Mr. Clapp Appreciated.

Regarding the citrus industry, Dr. Philpots states that growers speak in terms of great appreciation for the services of Mr. H. W. Clapp, Chairman of Commissioners, Victorian Railways, for the development of the citrus industry and the absorption of large quantities of Oranges as fresh fruit drinks.

Citrus Imports of Norway and Denmark.

Norway, from 1922 to 1926, imported annually an average of 371,000 boxes of Oranges and Lemons, of which Spain supplied 84 per cent., states "Citrus Leaves," U.S.A. The same years, Denmark averaged 290,000 boxes of Oranges and 40,000 boxes of Lemons. Spain furnished 62 per cent. of the Orange imports to Denmark and Italy 72 per cent. of the Lemons.

APPLE ROOT-BORER IN CITRUS.

The Apple root-borer seems to have transferred its affection, for it has been found making inroads into the citrus trees of Windsor (N.S.W.), and considerable damage has been done to the roots of both Oranges and Lemons.

Departmental officers are to carry out experiments with soil fumigants, such as calcium cyanide and paradichlorobenzene. Work is already in hand to test this method of control in Apple orchards.

DICKY RICE WEEVIL.

Protection of Citrus Trees.

Although it has been mentioned as feeding on Peach trees and garden plants, departmental investigations in N.S.W., do not reveal the dicky rice weevil as a pest of anything put citrus trees. It has been recorded only from New South Wales, and so far only in the Ryde, Castle Hill, Dural, and Kurrajong districts. In the localities mentioned, however, infestation is a matter to be reckoned with, and growers are advised to adopt the necessary precautions, important among which is the banding of the trees with a sticky substance in the spring.

Nature of the Injury.

The most serious loss is caused by the adult weevils feeding on the skin of the young fruit. The weevils commence to feed as soon as the fruit sets, and the greater part of the injury is caused during the ensuing three months. This injury, when severe, takes the form of a network of irregular furrows, which turn black by the time the fruit ripens, causing a very marked disfigurement, with a consequent lowering of market value.

When the weevils are numerous, up to 70 per cent. of the fruit may be badly disfigured, and a further 20 per cent. slightly marked. Considerable damage may also be caused to the foliage, particularly in the case of young or reworked trees, in which the growth may be greatly retarded or even arrested.

The larvae, which feed on the roots, have not been recorded as causing any very widespread damage.

Methods of Control.

The damage caused by the dicky rice weevil can be effectually prevented by banding the trunks of citrus trees with a suitable sticky material, so that the weevils cannot gain access to the fruit and foliage by crawling up the trunk, provided that—

1. The branches are jarred with a padded mallet immediately prior to banding, if any weevils are present.
2. Banding is carried out in the spring just before the fruit commences to set.
3. The trees are kept pruned so that all the branches are at least 6 inches above the ground, so that the weevils cannot reach them.
4. Weeds and grass are not allowed to grow up under the trees and touch the branches, since they then form a ready means for the weevils to reach the trees.
5. The necessary attention is given to the sticky bands after application, freshening the surface if it becomes coated with dust by scraping with a flat stick, and if necessary adding a little more material.

Details of the appearance and life-history of the insect, and of the control measures summarised above, appear in a pamphlet which is available free on application to the Under Secretary, Department of Agriculture, Sydney.

Citrus Growers at Murrabit.

Grower Replies to V.C.C.A

Says Majority of Growers Are Outside the Organisation.

Limitation of Agents the Stumbling-block.

Suggestions for Reorganisation.

The Editor, the "Fruit World."

Sir,—In the November issue of your journal the V.C.C.A. endeavors to explain away statements made at a meeting of citrus growers held at Murrabit (Vic.), which was reported in the "Kerang New Times" and "Fruit World."

In 1924-25, there were very few Murrabit growers outside the V.C.C.A. Inside two years, the membership dropped to six; even now the local branch has been re-formed the majority of growers are outside the V.C.C.A., and are classed as "Bolsheviks." What is the V.C.C.A. definition of the word "Bolshevik"?

During the V.C.C.A. tour of Victoria, there was a bumper meeting of growers at Murrabit. We were invited by the V.C.C.A. Executive to state our objections to joining the organisation.

Our main objection is the limitation of agents. Are growers expected to drop firms with whom they have built up a connection over a number of years to market their fruit through a small body of agents, who are receiving more fruit than they can legitimately dispose of?

To clear stores of large stocks, it is often necessary to rely on dealers to get them out of difficulties, which means the grower does not receive the true market value for his fruit; the dealer must be able to purchase at cut prices to make a profit.

The only solution to getting the majority of growers into a co-operative organisation is to adopt the open market principle, by allowing all reputable firms to come under the growers' supervision.

According to a letter from the V.C.C.A., this suggestion was received by the meetings addressed by them with comparative silence. Were these meetings representative of the majority of district growers, or were they just the few members of the V.C.C.A.?

What propositions were put forward by these meetings for getting the majority of growers into the organisation?

The lack of support by the citrus growers and the breaking away of the Tomato-growers was the reason for increasing the levy one penny per case. Taking into consideration the production of citrus in Victoria and border districts, the levies received by the V.C.C.A. show they control less than 40 per cent.

Included in their levies are those deducted by the accredited agents on all consignments received from non-members of the V.C.C.A.

At the recent meeting here, when re-forming the local branch, several growers stated their reasons for joining up. The V.C.C.A. Chairman (Mr. Schwennesen) was the only speaker who was satisfied with the organisation under its present constitution, Most of the speakers said they expected big alterations, otherwise they would have to drop the show once again. Some re-joined to participate in the contract to supply the Victorian Railways with Valencias at 13/6 F.O.R.

To growers interested in this controversy, I would suggest they read the statements published by the V.C.C.A. in the "Kerang New Times" (23/10/28) and the "Fruit World" (1/11/28). In the former, in reply to charges made by Mr. S. G. Taylor, they go into detail, and deny all knowledge of the affair. Eight days later, in the latter paper, they are having enquiries made. Why the alteration? Is it a fact the amended statement to the local paper arrived too late for alteration?

The Aunt Sally which I knocked over was put up by Mr. Cook at Murrabit, and I believe again when he addressed the South Australian Tomato-growers, he stated that 80 per cent. of the Queensland fruit that came on to the Melbourne market went through the V.C.C.A. channels. My challenge is that if I cannot name at least one firm in Melbourne that handles more Queensland fruit than all the accredited agents, there would be £50 to the Murrabit Bush Nursing Centre, or any charitable organisation named by the V.C.C.A. Mr. Cook tries to back out of this, by saying he mentioned one district where an effort had been made to organise the growers. Let us know the district, and I will consider applying my challenge to the individual district.

Early in the season the accredited agents were getting up to 51 per cent. of Queensland consignments. After a few weeks, there was a decided break away, until in a very short time the accredited agents were getting less than 1 per cent. of the Queensland consignments. The Queensland growers are organised compulsorily under the Committee of Direction of Fruit Marketing, and have their own representative in Melbourne to attend to their affairs, his salary being paid out of a freight overcharge levied by the C.O.D. on all the Queensland fruit-growers. Because the accredited agents get a few consignments on which they deduct levies for the V.C.C.A., it cannot be claimed that they have any control over that State; they might go so far as to say they control all varieties of fruit sold by the accredited agents. I would like to ask Mr. Cook if his statement re New South Wales is correct—that is, they control 75 per cent. of the controlled areas. New South Wales is the largest citrus-producing State, and if the levies received (£70) is 75 per cent. of the controlled areas, practically every grower in that State is outside any organisation.

Quite recently, Mr. Cook went across to South Australia to try and get the Tomato-growers under his wing. How many accredited agents accompanied him on this tour of organising for the growers? These same growers have recently appointed their own market representative on the Melbourne markets; some Victorian Tomato-growers are following suit after two years' experience of the V.C.C.A. Surely the Executive have got sufficient intelligence to realise that there must be something radically wrong with their organisation when the support is falling away fast.

Re my statement re V.C.C.A. prices, their own Chairman stated that the published prices were the minimum prices. If so, judging by the prices returned to growers, the majority of citrus must be standard quality and lower. I can produce sworn declarations from purchasers that they cannot purchase citrus fruits from the accredited agents at V.C.C.A. published prices, in lines or

otherwise. When asked for an explanation, it is generally put forward that in returning better prices, the outside agents are dipping in their pockets to keep their trade. This seems strange, considering that they are handling the majority of the citrus. These agents must have reserves equal to the Bank of England, for one never hears of too many going bankrupt.

Taking one grower's experience this season, and he is willing to publish his account sales, split a consignment between an accredited agent and an outside agent,. Before receiving his returns, he sent a further split consignment. The counts and quality were identical in each instance. The account sales showed 10/4 per case gross from outside, and 6/4 gross from the accredited agent. The second consignment met with similar results. The account sales from the accredited agent were signed by the market representative, no comment being made as to why the fruit did not bring market value. The published prices were 8/- to 12/- per case. Growers generally are in the business for a living; therefore, must go where they get the best and most consistent prices.

In reference to the Leeton grower who owns a packing house and states the V.C.C.A. published prices are the truest indication of the market, I would like to ask Mr. Cook if this grower sells on commission or F.O.R. Leeton, also what proportion of fruit from his shed goes through the V.C.C.A. channels? Are the accredited agents allowed under their agreement to purchase citrus direct from the grower on rail, grower's station? If not, why have some of them been purchasing in New South Wales and South Australia this season? Mr. Cook has repeatedly stated through the press that owing to dealers operating on the low values in other States, they have been able to undersell his agents. Does he include the accredited agents in his statement?

With regard to sniping at the organisation, I personally will state my objections to the present system:—

To join under the present marketing system, every grower outside must drop the agents with whom they have been dealing with for years to come under a scheme in which the majority of growers have no confidence.

If the V.C.C.A. are sincere in their endeavors to get the majority of growers into the organisation, a conference of citrus growers should be held in Melbourne, the delegates to be elected by the majority of growers in each district, irrespective of any organisation, to discuss the marketing question. Replying to my query at the Murrabit meeting, the V.C.C.A. Chairman stated that the main objections to any alteration would be the Accredited Agents' Association.

If the V.C.C.A. will not take any notice of the growers outside their organisation, then it is up to those growers who believe in the co-operative movement to get together and adopt a marketing scheme agreeable to the majority of growers.

The "Citrus News" states that the V.C.C.A. districts are solid behind the limitation of agents. Why is the majority of fruit from these districts going outside the scheme?

In conclusion, it is pointed out that we must at all times abide by a majority rule. Certainly! If the V.C.C.A. abided by the wishes of the people of Australia, they would have a marketing scheme conforming to our great national policy, "White Australia." Recently an extraordinary general meeting of the shareholders of Murrabit Packing Co. Pty. Ltd. was called for the purpose of adopting a majority report of our directors and to issue instructions to the minority of directors (including the V.C.C.A. Chairman), that they must abide by a majority decision.

The V.C.C.A., being a proprietary company, it is necessary for growers to take up shares before they can become members or shareholders. The usual practice before investing money is to ascertain the financial standing and the support given to the company concerned. Why not publish the balance-sheet of the V.C.C.A., showing details of receipts and expenditure? Even the "Citrus News" has not had the honor of showing this enlightening document to growers this year, nor have the registered members in this district received any notice of meetings of the local branch to accept the last balance-sheet of the V.C.C.A.

Yours faithfully,
William H. Jackson.
Murrabit, 21/11/28.

FROST DAMAGED VINES.

The wonderful recovery made by the vine s that suffered severely from frost last year in the Murray Valley, has surprised Mr. F. de Castella, the Victorian Viticulturist, who recently visited the area.

Mr. de Castella saw a remarkable growth of fruit on the vines, and there was a marked absence of disease. He noticed that some growers had not taken the precaution to spray, and to these men he pointed out the risk they were taking. In such an abnormal year, anything was likely to happen, and downy mildew might follow the warm spring rains, in districts considered fairly safe from the disease.

CALIFORNIAN CROP REPORT.

A preliminary check on production indicates that California produced about 609,000 tons of Peaches in 1928. Last year the total production of all varieties amounted to 492,000 tons compared with 541,000 tons in 1926. The production of Clingstone Peaches is estimated at 395,000 tons, which is the same as forecast throughout the season. Out of this total, 330,000 tons were canned, and about 15,000 tons marketed fresh. The total production of Clingstone Peaches in 1927 amounted to 322,000 tons, of which about 72 per cent. was canned. Two years ago the crop was estimated at 327,000 tons, and 96 per cent. was canned. The 1928 production of Freestone Peaches is estimated at 214,000 tons, which may be compared with 170,000 tons produced in 1927, and 214,000 tons in 1926. The tonnage dried was somewhat above that of a year ago, and from present information, about equal to that of 1926. There were very few Freestone Peaches canned this season.

The Pear harvest has been completed, with the exception of some of the fall and winter Pears. Production of all varieties is forecast at 220,000 tons. In 1927 the total crop of Pears amounted to 181,000 tons, while in 1926 the tonnage harvested was estimated at 207,000 tons. The tonnages canned, dried and shipped fresh this season are all above the tonnages so utilised a year ago.

The total production of Apples in California, is now forecast as 11,806,000 bushels. Last year the total crop amounted to 7,458,000 bushels. About 4,722,000 boxes of this season's crop will be used for by-products.

There is a slight improvement with regard citrus prospects over previous estimates, and present conditions indicate that crops will be 94 per cent. of normal.

The total production of Grapes of all varieties is now estimated to be 2,300,000 tons. Last year the production was 2,406,000 tons, of which 142,000 tons were not harvested.

Raisin Grapes are estimated to be 1,386,000 tons, but it has been impossible to get an accurate estimate of the dried Raisin crop this season. Last year the total production of Raisin Grapes was 1,443,000 tons.

The preliminary estimate of the total production of Prunes is 185,000 tons. Last year the Prune crop was 203,000 tons.

Developing British Ports.

Progress at Manchester.

(By R. E. Boardman, A.F.I.A.)

AN OUTSTANDING triumph is that of the conversion of an inland city to the fourth port in the United Kingdom.

Manchester as a seaport visualises not simply the triumph of superlative engineering skill, but is the living expression of a great faith.

The spirit of enterprise which transformed this inland city into a seaport less than 40 years ago is manifest in the determination of the present generation to develop this port to its fullest capacity.

Manchester is a great manufacturing city. Included in the area served by this port are 200 towns and cities, in which there is a population of approximately 12 million people.

Manchester is a very important port for receiving direct shipments of produce from Australia and New Zealand. Not only is there a large local consumption, but from Manchester the goods can be effectively and cheaply distributed to the huge population in the area served.

I visited Manchester during the holding of the Imperial Fruit Show—a first-rate enterprise, where produce from various sections of the Empire is favorably displayed. So successful was the show at Manchester, that the 1928 Imperial Fruit Show was again held in the same place.

The Municipal Markets.

I met Mr. Chadwick, Superintendent of the Municipal Markets, and his fellow officers, who courteously showed me over the great Smithfield Market and cool stores. The previous Superintendent was Captain W. J. Wade, who now represents the port of Manchester in Australia, his headquarters being at 8 Bridge-street, Sydney. Captain Wade's letters of introduction were appreciated. The Smithfield Market covers an area of six acres, nearly all under one roof. In area and volume of business transacted, it ranks next to Covent Garden, London; there are over 500 market tenants, and their annual turnover amounts to several million pounds sterling. The market is well laid out, having wide intersecting roads and passages—very convenient for inward and outward deliveries. This is the principal centre for the distribution of supplies required by the large population of Manchester and the surrounding towns.

I chatted with wholesale and retail fruit distributors, and found them to be bright and alert. Indeed, they were thoroughly familiar with the fruit from Australia and New Zealand, knowing the varieties which were best for local and distant trade, and appreciating the districts in the southern Dominions which supplied the best fruit, also the brands of the growers. These points are mentioned so that Australian and New Zealand shippers may recognise that the English buyers pay keen and practical attention to the fine points of varieties, brands, grading and packing.

Immediately adjoining are cool stores, with a capacity of 5,000 tons. These cold stores hold in their chambers fish, meat, dairy produce, fruit, etc. In the cool stores I saw, among other items, quantities of D'Anjou Pears from Rogue River, Oregon, U.S.A.

The cool stores are well laid out, with ample delivery space on platforms, waggon-high, and are internally fitted with elevators for prompt transfer to and from the cold chambers with a minimum of handling.

The Manchester Ship Canal.

The length of the canal from the River Mersey to Manchester is 35½ miles. As the city is 60 ft. above sea level, the canal is divided into five sections, with five sets of locks. At the Manchester terminus there are eight docks, with a water area of 120 acres. The 40 transit sheds are so close to the berth that goods can be transferred from ship to shed with a single movement of the crane.

It was a pleasing experience to inspect the Manchester docks, and I would take this opportunity of expressing appreciation for the facilities so readily afforded me. These docks possess some of the most up-to-date equipment in the country, including electric, hydraulic and steam cranes. There is ample warehouse space, including 300,000 cubic feet of cold storage space. The sites within easy access of the docks, managed by private concerns or by the Manchester Corporation, cold storage premises are available with a capacity of 3,000,000 cubic feet.

Scene at One of the Manchester Docks.

The Manchester Sale Room.

The Manchester fruit auction rooms are convenient to the docks. Sales are held twice weekly throughout the year, and buyers for the wholesale trade attend from Lancashire, Yorkshire, the Midland counties, and Scotland. Upwards of 2,000,000 packages are disposed of annually in these rooms, and over 100,000 cases are frequently sold in a single day.

General Australasian Representative:
H. G. COLOMBIE
Temple Court, Collins Street, Melbourne
'Phone: F3284.
Telegraphic Address: "Columbine," Melbourne.

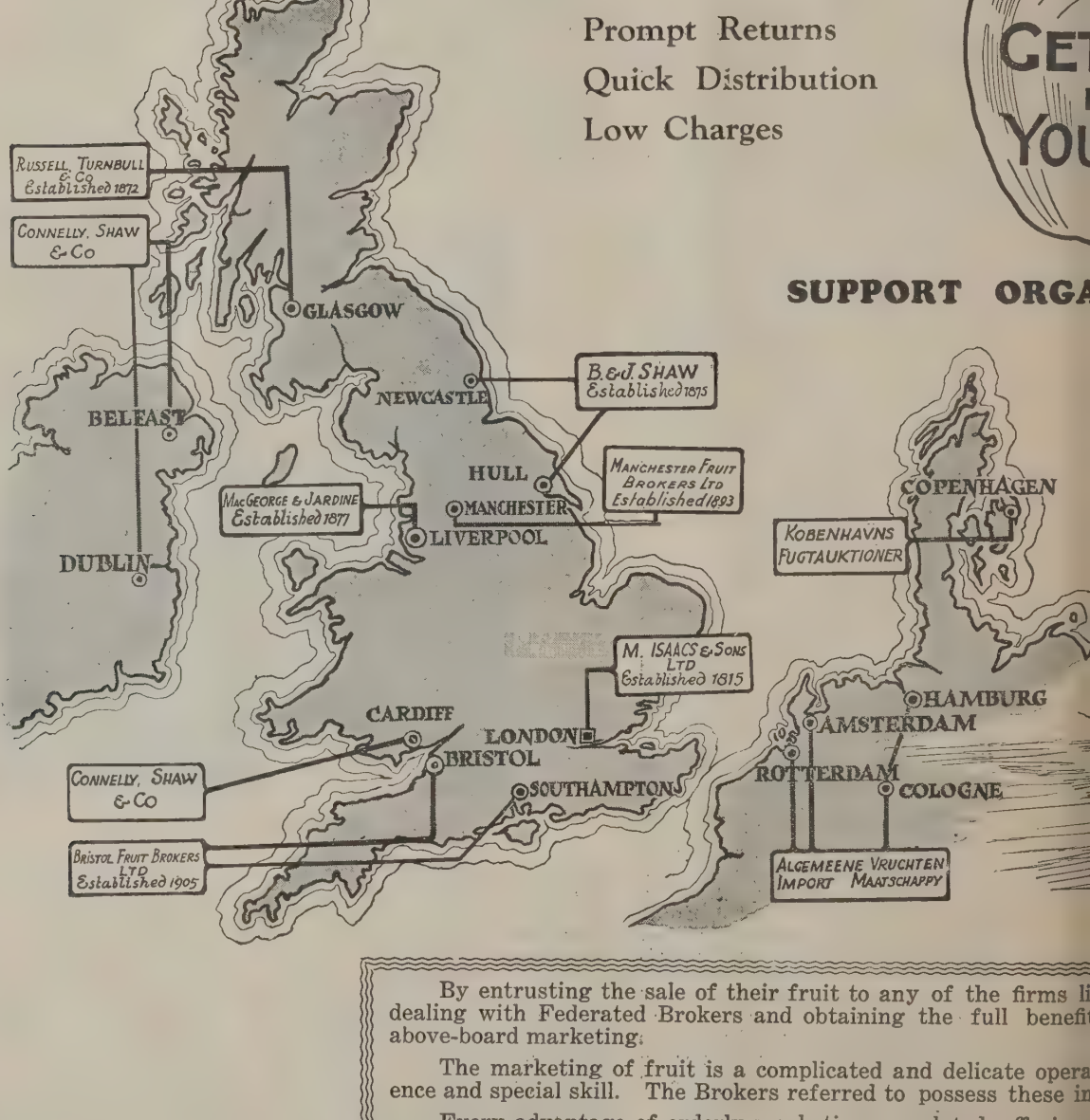
Over 20 years' experience in the marketing of fruit Overseas.

INCREASE Y

The Most Comprehensive

Prompt Returns
Quick Distribution
Low Charges

SUPPORT ORGA



By entrusting the sale of their fruit to any of the firms li
dealing with Federated Brokers and obtaining the full benefi
above-board marketing.

The marketing of fruit is a complicated and delicate opera
ence and special skill. The Brokers referred to possess these in

Every advantage of orderly marketing, regulated offerings
knowledge of what happens to your fruit, is assured to you by t
tion not built up on paper, but created by generations of solid w

UR RETURNS

NG

anisation in the Fruit Trade

For shipping space, advances, etc., apply to the Shipping Representatives shown on this map.

AUSTRALIAN GROWERS!

Profit by the experience of others, and **SUPPORT ORGANISED MARKETING.**

CENTRALISE the sale of your fruit **IN** the **ONE RECOGNISED AUCTION SALEROOM AT EACH PORT,** where Overseas Fruit is concentrated, and where large numbers of buyers attend regularly, ensuring **WIDE DISTRIBUTION.**

This **CONCENTRATION ENABLES BROKERS** to **REGULATE SUPPLIES** and **STABILISE PRICES.**

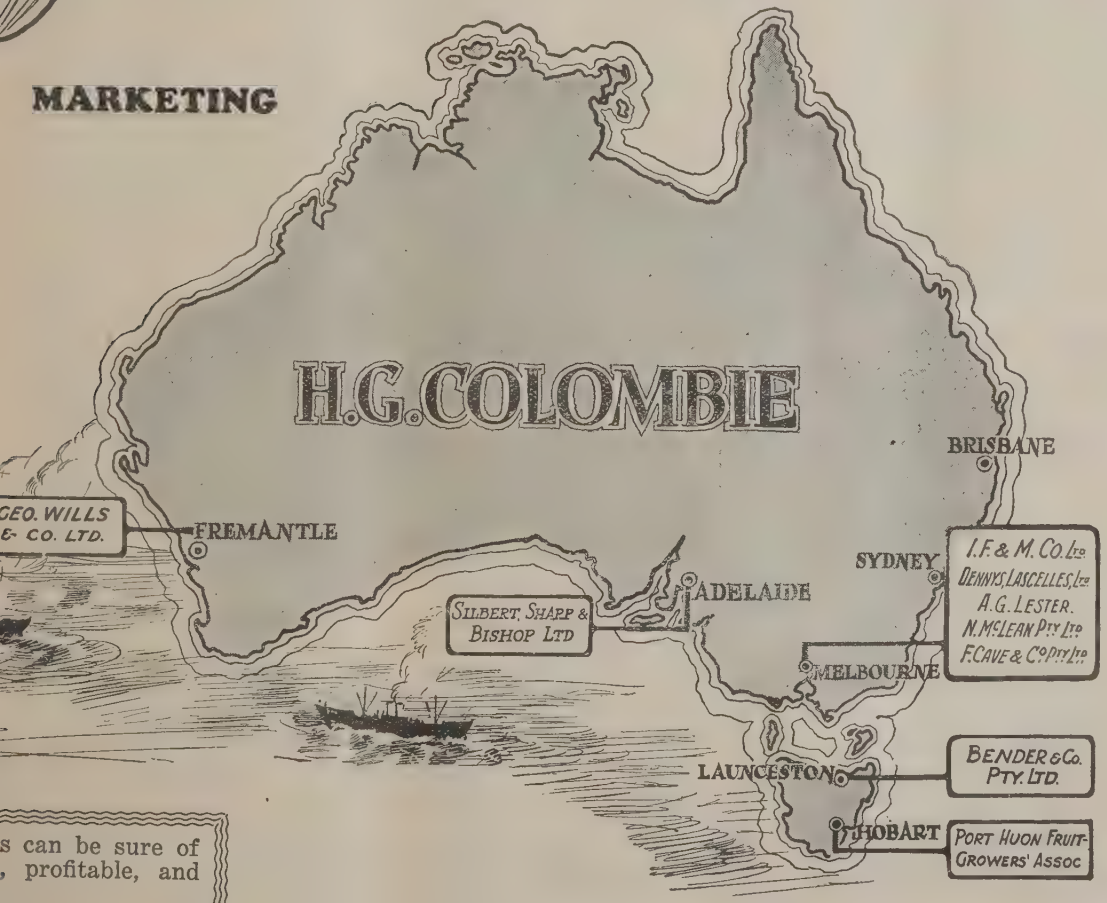
By this system **BUYERS** are **MADE** to **COMPETE** for the fruit to the **BENEFIT** of **YOUR RESULTS;** whilst by other methods Salesmen compete to obtain buyers.

CATALOGUES are printed for Buyers before sale, and reprinted after sale, **SHOWING ACTUAL PRICES PAID for your fruit.** No manipulation of results possible.

Parcels are sub-divided to enable all buyers to compete on equal footing.

Each parcel is valued by Auctioneer before sale, and lots not realising reserve prices are withdrawn.

MARKETING



s can be sure of
, profitable, and

for great experi-

arkets, and full
ion; an organisa-
ctical experience.

The brokers sell in turns from the one rostrum. Buyers can inspect the bulk at the docks, mark their catalogues, buy from samples at the sales, when delivery can be promptly secured. While the sale proceeds, lifts are continually operated, bringing up samples, and returning same to the storeroom below after inspection.

The sale room presents a busy scene on the auction days. The buyers are comfortably seated on tiers of seats, arranged in semi-circular fashion, converging on the auctioneer's rostrum.

In order to secure its due and adequate share of the trade from Australia and New Zealand, the Manchester Ship Canal Company has placed an experienced officer here in the person of Captain W. J. Wade, of Sydney.

The point on which stress is continually laid in relation to shipment from these southern lands to England is just this:—

Why send produce to other ports for distribution in the Manchester area? It would be cheaper and save much handling to go direct to Manchester.

HON. W. H. CALVERT WINS.

Orient Company's Prize.

The competition arranged by the Orient Steamship Company for the best packed cases of Sturmer Pippin and Scarlet Nonpareil Apples, was judged by the Chief Horticulturist of the Tasmanian Agricultural Department (Mr. P. H. Thomas), assisted by Messrs. T. D. Raphael and A. S. Brennan. There were 21 entries for both classes, and the competition was keen.

The fruit was packed during the recent export season, and two cases of each variety were shipped in the usual way to London, where they were judged on arrival. Two cases were retained in cool storage until opened recently by the judges. The whole of the exhibits opened up well, and there was little difference between them on the score of quality, freedom from imperfections, grading and packing. The highest number of points was scored by Hon. W. H. Calvert, with 387, out of a possible 400. Mr. A. C. Stokell was second, with 380; and Mr. H. H. Watson third, with 378.

The Hcn. W. H. Calvert, M.L.C., also won the prize donated by the Orient Company, for a similar competition held in connection with the Royal Sydney Show, at Easter.

South Australia Forms Marketing Association

Apple and Pear Export

Mr. H. G. Colombie, who was instrumental in forming the Victorian Fruit Marketing Association, has just returned from a trip to South Australia and Western Australia. In these States he visited practically every Apple-growing district, and addressed growers on matters affecting the better distribution, organisation and sale of Australian Apples in Europe.

As a result of Mr. Colombie's lectures a special conference of Apple growers, exporters and shippers, was held in Adelaide. Mr. H. J. Bishop presided.

Mr. Colombie, in the course of his address to delegates, referred to the necessity for organisation in the Apple exporting States, and the co-operation of various States. Up to five years ago, Australia more or less had the export market to itself. South Africa had made great strides in regard to the export of Apples, marketing one million cases last year. South America was also expecting to go on to the European market shortly. Australia was favored for the growing of Apples and Pears, whereas South Africa worked under certain disadvantages, but proper organisation was necessary.

Amongst other things, he advocated the taking of a census of varieties of Apples grown, unpayable varieties to be eliminated, compensation to be paid out of a fund. He also advocated the better packing and grading of Australian fruit, more on the lines of America or New Zealand, and the co-operation between growers and shipping interests. The Speaker for the House of Assembly, the Hon. J. R. Laffer, and Mr. G. A. W. Pope, Government Produce Department, supported Mr. Colombie's proposal for a Fruit Marketing Association.

It was subsequently decided that representatives of the South Australian Orchardists' Association, together with outside growers, exporters and shippers, confer with the view to drawing up a scheme for State co-ordination on similar lines to that adopted by the Victorian Fruit Marketing Association. The following delegates were appointed:—Messrs. W. R. Lock, L. Plush, R. O. Knappstein, R. S. Nolan, N. Wicks, Miller, A. Mack, W. H. Henderson, Dudley Hannaford, R. Pritchard, F. James, J. Porter, J. B. Randell, R. Hales, M. Vickers, H. H. Schulz, A. Brearly, P. Pitman, G. B. Basey, Hamat, Ricks, A. J. Mitchell, G. A. W. Pope, D. Blyth, G. Selth, Filsell, H. J. Bishop, G. Mack, and H. R. Charlick.

South Australian Fruit Marketing Association Formed.

At a banquet to delegates and representatives of the fruit-growing industry, on November 14, the following resolution was carried unanimously on the motion of Mr. N. Wicks, President of the Orchardists' Association.

"That this meeting resolves that a voluntary organisation, embracing all growers and shipers of deciduous fruits in South Australia, and to be known as the South Australian Fruit Marketing Association, be and is hereby declared formed, with the object of improving the industry in general."

The motion was seconded by Mr. F. James, Secretary of the Cudlee Creek Co-operative Cool Stores. The following toasts were proposed: "The King," "The Chairman," "The Industry (coupled with the name of principal guest, H. G. Colombie, Esq.)", Hon. Geo. Laffer, M.L.C.; "Parliament," Mr. J. B. Randell, reply by Hon. H. W. Coneybeer; "The Fruitgrower," Mr. Geo. Selth; replies by Mr. N. and L. J. Wicks, President of the South Australian Fruitgrowers' and Market Gardeners' Association.

ELECTRIFIED GARDENS.

The electrified garden is the latest thing in agriculture in Sweden.

From articles current in the United States press, it would appear that the so-called "electrified gardens," or electrically heated hot beds in Sweden now cover 6,000 square yards, principally given over to the growing of vegetables. One individual holding near Stockholm covers 1,500 square yards, and so satisfactory have been the results that the wiring is to be extended over an additional 900 square yards. So successful is the method that it is stated that it has been possible to harvest a crop of vegetables 40 miles north of the Arctic circle by March 28.

THE BATTLE OF THE ORCHARDIST.

With Jonathans and Romes,
Did his orchard win renown;
Granny Smiths have pleased the homes,
So have Statesman and Five Crown;
And the Stewarts round about
Proudly shone.
All the cases did he brand
In a bold determined hand;
And his neighbor on the land,
Led him on.

Like fairy lamps abreeze,
Or the stars upon the brine,
Glistened Apples through the trees,
Right along the furrowed line;
'Twas a sight that all agreed
Was sublime.
In the orchard there beneath
Was a fortune to bequeath;
And the pickers held their breath,
For a time.

The hearty men were flushed
To be soon upon the scene;
And toward their task they rushed
Through the avenues of green:
"Don't ease up," their leader roared,
Like a gun;
"Think of him who needs must part
"With the Apples of his heart,
"In the thoroughfare and mart,
"When you're done."

They toiled from morn till night,
And their efforts did not slack,
Packing cases well and tight,
But still empty ones came back;
And their voices through the air
Clearly boom.
Then they ceased when light did fail,
And they sought the homeward trail,
But without complaint or wail,
In the gloom.

Out spoke the leader then,
As he gave a parting wave:
"I shall see you soon again;
"For the morrow let us save,
"And fresh energy and will
"Let us bring;
"For these cargoes are as meat
"To the British merchant fleet;
" 'Eat more fruit, and have a treat,"
"Let us sing."

The crop a record grew,
And disturbed the chief's repose;
And the markets then fell through,
When the storage quickly rose;
While the charges mounted up,
Day by day.
So the profits that looked bright,
Seemed to vanish in a night;
And the hope that now was slight,
Died away.

Our voices we should raise,
When we eat the luscious fruit,
In a song of thanks and praise,
To the orchardist, now mute;
For the labor of his love
Is no more.
There's a meagre recompense
For his trouble and expense;
Cultivation's more intense,
Than of yore.

But still Australia's pride
In the orchardist is strong;
And its faith is not belied,
For he's staunch when things go wrong;
Weak men would oft be driven
To their grave:
He labors steadily on,
And the orchard work is done;
And till fortune has been won,
He'll be brave.

—Yeboscar, Franklin, S.A.,
20/10/28.

THE ENGLISH APPLE MARKET.

Outspoken Comment by Fruit Merchant.

Messrs. M. Isaacs and Sons Ltd., fruit brokers, of London, in their latest circular, take Australian Apple exporters to task for the unsatisfactory methods adopted last season.

The firm states that the 1928 season was an unsatisfactory one from many points of view. Prices, which were at first remunerative, dropped to a very low figure during the progress of the season. Some of the varieties sent over were unsuitable for the English market, and they strongly advise growers not to ship Allington Pippins, Buncombe, Crow's Egg, Golden Pippin, Hoover Pippin, James Grieve, Mobb's Codling, Peasgood's Nonsuch, Winter Majetin, Ranelagh, Shockley and Trivett.

Alexanders, they say, should only be sent on boats early in the season. The quality of the fruit from Victoria was generally satisfactory, although bruising was much in evidence, and Jonathan Spot was fairly prevalent.

Tasmanian Apples were not up to the standard of previous seasons, and bruised fruit was much in evidence. C.O.P. were badly affected with bitter pit, but Cleos. and Jonathans were slightly better than previous years.

Tasmania, the report states, has much to learn in packing and grading, and boxes had been used with sides so warped that the fruit fell out on the quay on discharge from the steamer.

The condition of Australian Apples generally, from the commencement of the season, was none too good, although some efforts had been made to pack attractively, and more use was being made of the Canadian whitewood bushel box.

(Continued on next page.)

Australian and N.Z. Apples in England.

Distribution at Various Ports.

The importance of Hull is set forth in a carefully compiled statement just issued by Major H. S. Cole, 7 Bridge-street, Sydney, who is the representative in Australia, of the London and North-Eastern Railway. Statistics are quoted showing the quantities of various goods imported into England through various ports, and demonstrating the opportunity for shippers in Australia to secure more equitable distribution to favorable markets in Great Britain. The figures relative to fruit, are as follows.

Comparative Table showing the Ports in Great Britain at which Importations of Apples from Australia were Discharged during the 1928 Season.

Month Discharged. 1928.	London.	Southmpton.	Liverpool.	Manchester.	Hull.	Glasgow.	Total No. of Cases.
March	43,379	—	—	—	—	—	43,379
April	566,883	—	37,448	—	94,307	—	698,638
May	654,888	8,144	194,932	—	157,868	15,632	1,031,464
June	411,362	9,929	177,831	20,266	101,499	—	720,887
July	528,431	—	143,635	—	86,039	—	758,105
August	142,521	—	—	—	—	—	142,521
Total Cases	2,347,464	18,073	553,846	20,266	439,713	15,632	3,394,994

Comparative Table showing the Ports in Great Britain at which Importations of Apples from New Zealand were Discharged during the 1928 Season.

March	—	8,096	—	—	—	—	8,096
April	90,622	53,205	—	—	—	—	143,827
May	161,629	12,929	6,997	—	—	—	181,555
June	174,237	39,755	14,696	—	48,825	—	277,515
July	38,454	20,289	39,956	—	—	24,470	123,169
August	5	—	9,759	—	—	7,869	17,633
Total Cases	464,947	134,274	71,408	—	48,825	32,339	751,793

Isaacs and Sons strongly advocate the use of the Canadian box, and the placing of attractive labels at the heads of boxes. Wrappers might, with advantage, be stamped with some design or printed matter. The Opposum brand, shipped from Victoria, had received returns varying from fourpence to 1/4 over the general run of prices, owing to attractiveness, and Diamond brand also reaped the benefit of greater popularity for a similar reason.

SUMMARY OF ENGLISH SHIPMENTS.

Apples and Pears, 1928.

Messrs. Esmond Russell Pty. Ltd., fruit exporters, of Melbourne, and representatives for Messrs. Geo. Munro, London, in a recent summary of Apple and Pear shipments to England, provide interesting information to Australian growers.

Geo. Monro Ltd., who sell by private treaty, handled over fifty per cent. of New Zealand's total exports to England last season. They do not take kindly to the Canadian softwood standard case, and urge growers not to change over to this type until fully satisfied that it meets all requirements. Geo. Monro Ltd. consider the case is not strong enough for the amount of handling it gets in transit. The report states that Manchester, where all Liverpool consignments were sold, again proved itself worthy of greater attention, but Granny Smiths should not be sent to either of the northern ports in large quantities, London being the best market for that variety.

The average prices realised in England for the season, all boats and varieties, is 10/5, and costs for the year have been:—

London.—Freight, 3/6; commission (5 per cent. average), 6¼d.; landing and delivery, 1/-; advertising, ½d.; insurance, average ¾d. Total, 5/1½.

Melbourne.—Forward and supervision, 4d.; stevedoring, etc., 1½d.; exchange, average ¾d. Total, 5¾d. Grand total, 5/7¼d.

QUEENSLAND.

Cultural Hints, News and Notes.

FOR SOME TIME the fruit districts throughout the State—with the exception of the temperate area—have been subject to prolonged drought, consequently the prospects for ensuing crops are not particularly bright.

Following upon a heavy setting of citrus the fall of young fruit was excessive and still continues.

Mangoes hold their own, but they are a small item.

Coastal Grape vines have made but light growth, and consequently light crops, which should commence to ripen up during next month.

A few stone fruits are noted on the Brisbane markets, but are rather immature.

Early Plums are anticipated, and a good yield is expected.

Peaches do not promise such an abundant yield, but a fair to good crop is indicated. This also applies to Apples and Pears.

Bananas have recently been very plentiful, but deficient in size. With the extensive areas being planted this year, and the return of seasonable weather conditions, a decided increase in quantity and quality can be looked for in the future.

Pineapples are not so readily affected by the absence of moisture, but the effect is noticeable.

The estimated returns for the coming season are as follows:—

Twelve Months.	Bushels.
Bananas	1,255.000
Pineapples	476.500
Apples	150,000
Peaches	82.000
Plums	50.000
Custard Apples	30,000
Citrus	280.000
Other Fruits	196,000
	Tons.
Grapes	1,250

Despite the scourge of bunchy-top (which is being very materially reduced), and the ravages of beetle borer, Banana planting is being carried on extensively where permitted by the authorities, and large quantities of Banana plants are being supplied to N.S.W. Given fair conditions, large quantities of fruit will become available next year, and the next problem will be how to dispose of it. Wholesale prices in Brisbane are barely remunerative, but retail rates do not show a corresponding reduction.

On returning from a recent official visit to Java, Mr. F. L. Froggat (entomologist), brought a quantity of specimens of a parasite, which it is confidently anticipated, will have an important bearing upon the Banana weevil borer. Mr. Froggat also brought duplicate plants of six varieties of Bananas not previously tried in the State. These will be grown in quarantine at Palm Island, for a period of two years, when, if disease is not evidenced, they will be removed to the mainland.

Further interest is evidenced in connection with the Banana industry by the establishment in northern and southern districts of

Banana experimental stations.

Planting of about 15 acres of the southern station is expected to be completed during next month.

It is noticeable—not only in this State—that experimental, or rather research stations are conspicuous by their absence. That there is occasion for such station is most obvious, particularly in this State, where such a variety of climates and variations in soil and general conditions, prevail, and in their absence, much that could be profitably accomplished remains unattempted.

It is reported that the fatuous State nursery is to be closed down during next year. This can hardly occasion equal surprise to the selection of the site, which most obviously invited (and received) general con-

Do not run any Financial Risk with your Fruit but Consign it to

Telegraphic Address: "Apples, Brisbane."

H. V. GEEVES Registered Shipping No. 6.

FRUIT EXCHANGE——————BRISBANE

Selected Agent for:—

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

demnation. It is unfortunate that what should have been a most useful institution can only be referred to as absolute failure, resulting in heavy financial loss. There is some prospect of a further attempt being made under congenial conditions in the north —where facilities exist for some result.

A little variation has been noted in connection with the C.O.D., in Stanthorpe district. Mr. T. Thatcher (a leader of the League of Freedom) having been elected to the deciduous group committee, and subsequently chairman of that body, which plainly suggests the C.O.D. not being further accepted at its own valuation in local circles.

Maroochy District, Queensland.

Bananas, Pineapples, and citrus are the main fruit crops in this area. There are 800 acres of citrus, 1,500 acres of Bananas, and 1,500 acres of Pineapples. The citrus prospects are poor, and it is extremely unlikely that more than 50,000 cases of Oranges will be marketed from this area in 1929, owing to the dry period at, and since blossoming time. The 1928 crop would be approximately 150,000 cases of marketable fruit.

The Banana prospects are not good. Bunches are at a standstill, the dry period having prevented the fruit from filling. Pineapples will be a good crop if a reasonable amount of rain falls during December.

Darling Downs.

The prospects for the coming season for stone fruit, are poor, probably 40 per cent. of normal, states Mr. W. Leslie, Assistant Instructor in Fruit Culture, Towoomba, Q.

The citrus and Grapes, however, will have normal crops. A few acres of **Pecan Nuts** that have been bearing regularly for 12 years, are still looking well. **Avocado** is growing well in the Ravenbourne district, and at Roma, several fine varieties of Dates are bearing well.

Peaches, Apricots, and Plums are the chief stone fruit grown, and the citrus varieties include—Oranges: Washington Navels, Dunning's Navels, Late Valencia, Joffa, etc. Mandarins: Emperor, Beauty of Glen Retreat. Lemons: Lisbon, Eureka, etc. Grapefruit: Triumph and Marsh Seedless.

Various varieties of Grapes are grown throughout the area, and there are about 500 acres of vines in the Maranoa and Warrego districts. These districts also have 360 acres under citrus.

Tasmania

Crop Reports ∴ District News ∴ Advisory Board Meeting.

(By Our Correspondent)

THE wet weather experienced throughout October has continued into the present month, and nearly all districts report that orchard operations, particularly cultivation, have been retarded.

In the Huon district, the rainfall figures recorded at Franklin for September and October are 1,604 points. This is nearly five inches in excess of any previous year since 1923. The total for the corresponding months of last season was 346 points.

Apples.—Although it is too early to form a definite opinion of the setting of Apples, the evidence points that a medium to good crop may be expected (approx. 60 per cent. of normal crop). Ribston, French Crab, Dunn's, and Cleos. are generally reported to have only a "light" showing. Jonathan, Scarlet, and Cox's Orange are variable, whilst Sturmer, Tasma, Alfriston, Delicious, and Adam's Pearmain should, with suitable weather, result in a good setting.

Pears.—The Pear crop, on the whole, will only be from light to medium, the wet and cold weather experienced at the blossoming period being inimical to the setting of these fruits. Beurre Bosc, Jos. de Malines, Winter Nelis, Winter Cole, and Williams are generally reported to be extremely light. A few districts have a good setting of Glou Morceau, Beurre de Capiaumont, Doyenne du Comice, Buerre Clairgeau, and Gansells Bergamot, but, on the whole, only medium crops may be expected (approx. 40 to 50 per cent. of normal).

Apricots.—The majority of districts suffered from the frost which was experienced during late September. This considerably thinned out the young fruits, but it is now noticeable that many trees are now carrying medium crops, and the rains have materially assisted in developing them. On the whole, the prospects are for about a 50 per cent. crop, but a much larger proportion will be suitable for canning purposes than under normal conditions, returning higher prices to the producer.

Plums.—The reports received indicate that the crops are very patchy, these, together with the Apricots, were affected by the late frost. It is difficult to make any estimate of the crops at present, but they should be about 60 per cent. of normal.

Berry Fruits.—All plantations (except those upon the low-lying areas and have suffered from the excessive wet conditions) have made good development, and should warm, dry weather be experienced from now until ripening, the prospects are for about a normal yield.

These fruits are largely influenced at the harvesting period by the weather conditions, a hot wind occurring whilst this is in progress can easily account for a large proportion of the crops.

The information supplied in this report is designed to give growers and others interested an idea of the way the different fruit crops are developing, and must not be relied on at this stage. The position may be more definitely summed up in a report next issue, when a detailed statement will be prepared.

State Fruit Advisory Board.

Protest Against Federal Discrimination.

At the annual meeting of the State Advisory Board, held on November 2, the returning officer (Mr. G. A. Blakney) reported the following elected to be producers' representatives for southern districts for next two years:—Messrs. W. H. Calvert, M.L.C., B. J. Pearsall, M.H.A., T. J. Eddington, O. J. Morrisby, and A. Davies.

The Secretary detailed steps taken with regard to registration of "Guarantee Brand" for overseas export, and the meeting resolved that the Board proceed with the registration.

Mr. J. H. Astell was appointed to represent the Board at the annual conference in Sydney, of the Associated Selected Agents. The Board decided that Dr. W. J. Dowson, mycolo-

PINUS INSIGNIS.
Seed 8/- per lb.
F. G. STIRLING,
Ivanhoe, Victoria.
'Phone: Ivanhoe 234.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HEATY HOUSE." 499 LITTLE COLLINS ST. MELBOURNE.

gist, recently appointed by the Department of Agriculture, be stationed in the south, to study important problems relating to fungus diseases.

The Board agreed that all orchards under one acre, be rated as one acre, under the Codlin Moth Act.

Consideration was given to the proposal of forwarding experimental shipments of pre-cooled fruit and it was decided: "That the Minister for Agriculture be requested to approach the N.Z. Fruitgrowers' Federation to allow Mr. H. E. Stevens (Overseas Representative of the Control Board) to visit Tasmania for the purpose of discussing with members the procedure, methods, and results of the N.Z. Export Scheme, particularly in respect to the precooling of fruit for export, and that the Board will be prepared, if necessary, to defray the expenses of such visit."

It was also decided: "That the Overseas Refrigerated Tonnage Committee be requested to consider the appointment of a Refrigerating Engineer, who has specialised in the carriage of fruit to overseas markets, to meet the Board and discuss the matter of precooling Tasmanian fruit before export, and the possible benefits that may be obtained from such treatment."

The Board decided: "That the Minister for Agriculture be requested to forward a strong protest to the Minister for Markets in respect to the decision to withhold information as to the recommendations of the Conference of Fruit Inspectors, recently held in Melbourne, particularly as it is reported that a number of amendments to the regulations were suggested, which have not received the consideration of the State Fruit Advisory Board, which is the representative body of the Tasmanian Overseas Fruit Export Industry. Further, that as the other States exporting fruit would be represented by the officers of the Department of Agriculture, who are administering such regulations, and are in possession of this information, it is considered that such action constitutes a grave injustice in discriminating against the State which exports the largest quantity of fresh fruit to overseas markets."

With regard to the rough handling of fruit, a motion was carried: "That the Minister for Agriculture be requested to give consideration to the suggestions received from the Federal Government for the amendment of the Apples and Pears Act, 1918, to make provision for the State to supervise the handling of fruit for overseas export, and whether it is possible to put these into practical effect."

PAPER MULCH.

Berry growers in Florida, U.S.A., have decided to use paper mulch in large quantities, as a result of successful experiments carried out by the United States Department of Agriculture.

Tasmania expects an Apple crop 60 per cent. of normal in the coming season. Pears, fair to medium (40 per cent. to 50 per cent.); Apricots (reduced by frosts), about 50 per cent.; Plums, probably 60 per cent. Berry fruits normal.

H. WILSON

Wholesale Fruit Merchant and Commission Agent,

56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.

Branch at Victoria Market.

Late Partner in firm of G. WOOLF & SONS.

Bankers.—National Bank of Australasia (Western Branch), Melbourne.

City Telephone: M 2012. Private Phone: M 3055.

City Address: Box 4003, G.P.O., Spencer St., Melb.

Tasmanian Apples

Orders for Apples carefully handled and undertaken for all Overseas & Interstate Markets.

E. R. COTTIER & CO.

88 COLLINS STREET, HOBART - - TASMANIA

Tel. add. "ERCOT," Hobart.

Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

APPLES IN COLD STORE.

The returns supplied by the district cold stores throughout Tasmania for the month ending October 31, indicate that approximately 95,000 cases of Apples and 300 cases of Pears are still being held for the late markets.

It is interesting to note that from June, when the returns were first compiled, the total shipments ex cold store is only 95,000 cases, whilst, nearly 600,000 cases have been shipped from the growers' sheds being held under ordinary storage conditions.

These figures will show the impossibility of estimating the quantities of fruit available for shipment throughout the later months of the year, without some system of obtaining returns from each individual grower.

In Victoria, where the bulk of the late fruit for interstate and home markets is held in the district cold stores, the position can be much readily estimated, as very few growers in that State retain any varieties in their own private sheds.

Latrobe (20/11/28).

Apples and Pears (principally Apples) are the main fruit crops in the Latrobe district. Light yields will be the rule for the coming season, probably 40 or 50 per cent. less than last year's crop.

Mr. A. Boatwright reports that 1927 showed good returns, but 1926 did not pay expenses, and 1928 heavy crops rewarded growers with but small return for their labor.

Government rules, regulations, and fruit inspectors, have added further worry to the orchardist, with the result that many neglect their land, and turn to other avenues of trade.

Kettering, 21/11/28.

Mr. W. R. A. Roberts, Channel Evaporating Company, Kettering, Tasmania, reports as follows:—

Apples are principally grown here, also some Pears. Acreage, about 270.

Crop Prospects.—Apples, poor, about 50 per cent. of normal. Comparing the coming crop with that of last season, we expect about 30 per cent. of last season's Apples.

Some orchardists report that after a fair setting of Sturmer, which promised to be the heaviest variety, two-thirds have now fallen off. Yorks and Scarlets very light; Jonathan medium to poor. There has been a very wet and cold spring in this district. The whole Channel district reports a light crop.

Orchards which are well drained and which were not allowed to bear a very heavy crop of small Apples last season, and which have been limed and manured, show up the best this season.

As only a small percentage of growers put into the ground what should be put, this season, especially, they are reaping what they have sown.

Australian Dried Fruits.

Crop Statistics ∴ News and Notes.

AUSTRALIAN 1928 DRIED FRUITS CROP.

A.D.F.A. Figures.

The 1928 season will long be remembered by growers as a difficult one, states Mr. W. N. Sumner, Secretary, in his report to the Federal Council of the A.D.F.A. After having suffered the worst "freeze" in the history of the industry, hail and early autumn rains added their quota to the damage, which was estimated to be in the region of £1,000,000. The total tonnage processed by the A.D.F.A. packers was 30,058 tons, compared with 47,717 tons in 1927.

The total yields for the Commonwealth were:—Victoria: Currants, 3,572; Sultanas, 16,618; Lexias, 4,311. Total, 24,501 tons. South Australia: Currants, 2.088; Sultanas, 1,916; Lexias, 887. Total, 4,891 tons. N.S.W.: Currants, 130; Sultanas, 1,016; Lexias, 190. Total, 1,336 tons. Western Australia: Currants, 1,308; Sultanas, 163; Lexias, 605. Total, 2,076 tons. Grand total, 32,804 tons.

Of this amount, the agents of the A.D.F.A. handled:—Currants, 6,193; Sultanas, 18,328; Lexias, 5,741. Total, 30,262 tons.

Other Fruits.

Apricots.—The pack was 227 tons, or 184 tons less than last year, but, owing to the fact of a bountiful supply of fresh and canned fruits, sales have been much slower than usual, and merchants are finding difficulty in clearing their stocks.

Peaches.—Although early estimates of the crop were disappointing, the ultimate pack was 330 tons, as compared with 165 tons the previous year, and the quantity available has been more than sufficient for Australian requirements.

Nectarines.—The pack this year was 59 tons, compared with 23 tons for 1927, and market requirements have been fully met.

Pears.—The output amounted to 169 tons, which is the largest pack since 1924, and it was necessary to declare an export quota.

Muscatels.—Owing to the uncertain dry weather, the pack this year only amounted to 87 tons, as compared with 110 tons the previous year, and the bulk of this fruit was de-hydrated in South Australia.

At the conclusion of the report, the Secretary stated that:—

The position of Currants is satisfactory, as present season's stocks are practically exhausted, and it is hoped that the pack this coming year will be sufficient to enable larger quantities being made available for export markets, and this phase of the situation has been fully dealt with in a report made by the Commonwealth Dried Fruits Control Board.

Although strong representations have been made during the past year by the Federal Government to the New Zealand Government re the granting of preference on Australian dried fruits, it is to be regretted that no finality has yet been reached.

Irymple—Mildura.

The principal crops grown in this district are vine fruits for drying purposes—Currants, Sultanas, and Lexias. The approximate areas planted to each class of fruit in the three districts are:—

Dennys, Lascelles

Limited.

Temple Court, 422 Collins Street, Melbourne

HEAD OFFICE AND WOOL STORES AT GEELONG

Exporters of Fresh, Dried and Citrus Fruits to England, the Continent and New Zealand.

Personal Supervision of all Consignments at Port of Shipment. Prompt Returns.

Importers of Wrapping Paper and Swedish Woodwool

Suppliers of Cases Hardwood or Canadian.

	Currants. Acres.	Sultanas. Acres.	Lexias. Acres.
Mildura . .	2,524	6,048	1,364
Merbein . .	1,222	3,895	602
Red Cliffs .	797	6,912	1,299
Totals . .	4,543	16,855	3,265

The crop prospects for each fruit are particularly good, and growers anticipate good yields, considerably in excess of 1928. The last crop was exceptionally light on account of losses from frost just prior to the setting of the fruit in 1927. The 1928 crop figures were:—

	Tons.
Currants	3,445
Sultanas	13,539
Lexias	4,144
Total	21,128

BRISBANE

F. B. BOLTON & Co.
ALBERT HOUSE,
BRISBANE.

Brokers and Selling Agents for
FRESH FRUIT
DRIED FRUIT
CANNED FRUIT

We sell to wholesale Distributors only, and do not handle growers' consignments.
We act as Railway Freight Agents for growers' joint truck loadings, and secure lowest freight rates.
On Forward Sales of fresh fruit we act for sellers and collect cash in exchange for delivery order.

COVENT GARDEN,
LONDON
Ridley, Houlding
& CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.,
Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

Given favorable conditions till the harvest is concluded in April, the crop of Currants and Sultanas may be anticipated to be double last year's figures. No great increase in Lexia production is looked for.

To meet with the requirements of the inspection branch of the Department of Markets, and to cope with the anticipated large crop, considerable improvements and additions are being made to all packing sheds. New machinery is also being installed, which will assist in better packing conditions, and a more attractive pack. Exhaust fans for removal of dust and stems are now installed in most sheds, and washing and capstemming machines are becoming more popular.

HOW CALIFORNIA VIEWS AUSTRALIAN ANTI-DUMPING PROPOSALS.

The dried fruit situation in Australia is under observation in other parts of the world. The recent proposals for the total prohibition of Californian Raisins, or an increase of the duty have called forth the following comments in the "Pacific Rural Press":—

The Australian raisin producers are stirred up over the low California raisin prices, and are asking for an an anti-dumping tariff to be set up at once in Australia since the present crop there is only half of normal. These growers insist that the California exports are so cheap that they must be sold more cheaply than we are selling them for in the United States. This is not supposed by Californians to be the case.

Meanwhile imports of raisins into England the first 8 months of 1928 total 428,094 hundredweights (of 112 pounds each). Of this, California supplied 234,969; Australia, 171,320; South Africa, 36,701; Greece, 15,252; Smyrna, 13,499. The remainder came from a few other miscellaneous countries. The American portion shown here is almost twice as large as usual.

AUSTRALIAN WINES IN LONDON.

Australian wines won high praise from the judges at the Brewers' Exhibition held recently in London. In the Empire wines competition there was the largest entry since the war—115.

Awards made were:—

Bottled wines.—Hock type: Penfold (Sydney), 1; S. Smith & Son (S.A.), 2; G. Gramp & Sons (S.A.), 3. Claret type: Penfold, 1. Burgundy type: Penfold, 1. Red, full-bodied, sweet: Penfold, 1; Gramp & Sons, 2; Penfold, 3. Sherry type: Penfold, 1; Gramp & Sons, 2. Muscat character: Gramp & Sons, 1; Penfold, 2. Sparkling hock: Seppelt & Sons (S.A.), 1; Penfold, 2. Champagne: Seppelt & Sons, 1; Thomas Hardy & Sons (S.A.), 2. Sparkling burgundy: Seppelt & Sons, 1; Penfold, 2. Brandy: Penfold, 1.

Bulk wines.—Hock: Penfold, 1; S. Smith & Son, 2. Claret: Walter Reynell & Sons (S.A.), 1; Penfold, 2; Caldwell (Sydney), 3. Burgundy: Penfold, 1; Reynell & Sons, 2; Gramp & Sons, 3. Red, full-bodied: Gramp & Sons, 1; Penfold, 2; Smith & Sons, 3. Sherry: Penfold (S.A.), 1; Caldwell, 2. Muscat; Penfold, 1; Gramp & Sons, 2.

Fruit Shipments
United Kingdom
and the Continent
W. D. PEACOCK
& CO.
24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

TASMANIA
Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.
Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.
Correspondence Invited.
H. JONES & CO. LTD.,
HOBART

The Overseas Farmers' Co-operative Federations in London, during the last twelve months, sold primary products to the value of £8,500,000. Large quantities of fresh and dried fruits, eggs, and honey were sold on behalf of producers. Principal products handled were wheat and butter.

AUSTRALIAN WINE PROSPECTS NOT BRIGHT.

Speaking at Renmark recently, Mr. T. C. Angove, well known in the Australian wine trade, gave some interesting sidelights on the industry. Mr. Angove said:—

Since 1918, the extensive plantings of vines throughout Australia, both for wine and dried fruits had resulted in an output far beyond any possible Australian consumption. Little consideration had been given in the past either to the problem of marketing their increased production or to the type of soil in which the plantings were made. The result was that there were vineyards all over Australia, which the owners could not hope to make profitable; and no organisation or system of control or Government assistance could make unproductive land profitable, or enable the grower on it to make a living either from wine or dried fruit. On the other hand there were many vineyards that could be made profitable and more than self sustaining.

The annual Grape crop at present was far in excess of Australian consumption. Even last year—which was a year of shortage—the production of wine was round about 20,000,000 gallons, whereas the normal Australian consumption was not more than 11,000,000 gallons. At the present moment there was every prospect of a heavy Grape crop in all districts, and whatever factors might develop to reduce the yield, it could be safely assumed that the surplus to be dealt with would be much greater than that from the previous year.

The cellars throughout Australia were full. Owing to unlooked for developments, the expectations of export possibilities had not been realised and any extension of the industry depended wholly on their ability to export. At present New Zealand and England were the only countries in which they could place any considerable proportion of their wine, and in the English market they had to meet competitors who were spending immense energy in placing their wines in England at the lowest possible cost.

SWANN & Co.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian Agent: H. M. Wade & Co., 471 Flinders Lane, Melb.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches {Western Market / Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

CHEAPER FERTILISERS.

Reduction in Urea and Diammonphos.

Messrs. Dyes & Chemicals (Aust.) Ltd., announce elsewhere a reduction in price of the two highly-concentrated fertilisers, Urea and Diammonphos. Nitrogen, in the form of Urea, now quoted at 18/6 per 1 per cent. nitrogen, will enable fruitgrowers to take a fuller advantage of this pure and most effective form of nitrogen—the plant food which is of such prime importance to the fruit tree. One of the most effective methods of applying Urea is by means of the irrigation water, in which it is extremely soluble.

Diammonphos has a remarkably high concentration of phosphoric acid, namely, 52.5 per cent. One cwt. of this compound is equivalent in plant food to 1 cwt. of sulphate of ammonia, and 2½ cwts. of superphosphate. It is extremely soluble, very easily distributed and contains nothing but pure plant food.

These two fertilisers are coming into great prominence throughout the world, and have been spoken of very highly by leaders of agriculture, including Sir John Russell.

FUMIGATION OF PRODUCE.

Compulsory Sterilisation Urged.

As large shipments of Dates, Figs, Raisins, etc., are now arriving here from Mediterranean countries for the Christmas trade, the question of adequate fumigation, or sterilisation, to ensure freedom from harmful grubs, looms largely in public importance.

In order to guard against the introduction of pests and diseases into this country, Federal quarantine regulations have been drawn up. For the sake of convenience, the Federal regulations are frequently administered by State Horticultural officers, who thus act in a dual capacity.

For many years the Victorian Government has been urged to improve the hopelessly inadequate fumigator at the rear of the Department of Agriculture, 605 Flinders-street, Melbourne. Numerous deputations have waited on the different Ministers of Agriculture, pointing out the inefficiency of this fumigator, built 17

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

"YARRA"
BRAND
SPRAYS
PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street / 155 Yarra Street } Abbotsford, Vic.
Tasmanian Agents—
M. L. HOPKINS, HOBART

years ago, and the heavy costs of loading and unloading goods because of the antiquated facilities. Then recently the State Government, an an endeavor to meet the needs, provided a fumigator at the Government cool store at Victoria Dock. This, however, is not satisfactory.

Grocers point out that at times their deliveries are weeks in arrears; seedsmen say the same, and the effect of the congestion is always more noticeable just before Christmas time, when there are big importations of grocery lines for the Christmas trade.

HAMBURG
(GERMANY).

Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

F. W. Vear
Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
MELBOURNE, VIC.
Highest Market Rates Assured
Prompt Settlements

But that is not all. Delays and costly handling methods are only phases of the problem.

Only a proportion of imported lines are fumigated, and the outstanding fact is that even for such goods as are fumigated the kill of insect life is not complete. There is a serious menace from the importation of pests from interstate and abroad.

* * *

Under the present methods at the Government fumigator, it is necessary for cases of cluster Raisins, Dates, Figs, nuts, etc., to be opened before placing them in the fumigating chambers. The chamber is then closed, and lethal gases are generated, and the goods must remain for nearly 48 hours, being subjected to the fumes all the time. There is doubtless a good kill of visible insects, but that the kill is not complete there is ample evidence. The grubs which are embedded in timber, dates, etc., come through the fumigator unscathed, while the eggs remain fertile; thus after fumigation the goods may be infested again with life a few days later. Much produce comes in without fumigation. Borers, dried fruit grubs, grain weevils, and all manner of destructive pests, are thus being introduced.

The menace is very real. The plodia interpunctella (dried fruit moth), which causes such heavy losses annually in our dried fruits at home and abroad, is an introduced pest.

The only method which can be conceived as satisfactory is that of compulsory sterilisation of all imported dried fruits, nuts, grain, etc. This is not possible under the present system at the Government fumigators.

The New Method.

If the Victorian Government would utilise the system of the Hydro Vacuum Co., now operating at Inglesstreet, Port Melbourne, the problem would be solved.

This system is right along the successful lines adopted in U.S.A. At the big plant and warehouse of the Almond Growers' Association, at Sacramento, Cal., the Almonds are treated (sterilised in huge cylinders), and a big industry—once seriously threatened by grub infestation—has been saved.

If the Victorian Government will not spend the money necessary to put up an effective sterilising plant, then it would be best to give the work to the Hydro Vacuum Co., and to instal their officers there to certify that the work is thoroughly carried out.

* * *

The claim of the Hydro Vacuum Fumigation Co. is that by their patent process, combining efficient, economical and expeditious treatment, they can destroy grubs and their egg life in dried fruits, nuts, cereals; borer and white ant in timber; boll weevil in cotton.

On a recent visit to the Hydro Vacuum Co. works, the efficiency of the sterilising process was noted with pleasure. The work is done in four hours, as compared with 48 hours under the old system. Careful tests by the Department of Agriculture have proved that all insects are killed and the eggs destroyed.

Two kilns or steel cylindrical chambers have been erected, each 25 ft. long by 6 ft. 6in. in diameter. In this the goods for fumigation are packed, the door is clamped on, the pumps are set going to make a 27½ inch vacuum. A charge of lethal gas is then delivered into the vacuum chamber. By means of a fan, the deadly gases are kept whirling through the chamber.

There is no need for the cases to be opened: the penetration is perfect, the contents of the kin being completely sterilised. The next process is to draw off the fumigating gas. This is done by using the pump, and again a vacuum is created, leaving not the slightest trace of any taint from the gas. Pure air is then introduced, and the process is completed.

MARGETSON
& CO. LTD.
Fruit Importers & Salesmen
30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool
Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL
Head Office—Covent Garden Market, London, W.C.
Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.
Shipping Nos.
431 and 432

The grocery trade, fruitgrowers, and the general public stand right behind the request for the compulsory sterilisation of all dried fruits, nuts, etc., and infected timbers from abroad.

As regards Australian dried fruits for export, it would appear to be desirable that such should be sterilised by this effective fumigation system, after which the packets or packages should be sealed to prevent reinfection, thus giving confidence to buyers in the United Kingdom and elsewhere that our goods are free of grubs.

Subsoiling for Better Crops

Every Grower knows the value of Subsoiling. By its use the production of Arid Lands and worn-out Plantations is increased

Subsoiling at the Research Farm, Werribee, Victoria

Perfect Regulation of Depth Obtained

Filled with steel beam, strong and high, with adjustable handles.

The heel is adjustable to give the desired suction.

An excellent medium for loosening the subsoil.

It can be used with three or four horses, and a guage shoe controls the depth.

The "HARVEY-DELANY" GRADER

PERFECT GRADING - NO BRUISING

GRADES INTO EIGHT SIZES

Progressive Orchardists will find that it pays to instal the "Harvey-Delany" Grader, because it is built on lines for efficiency and long service, and is just the machine for the grower who wishes to cut down labour costs.

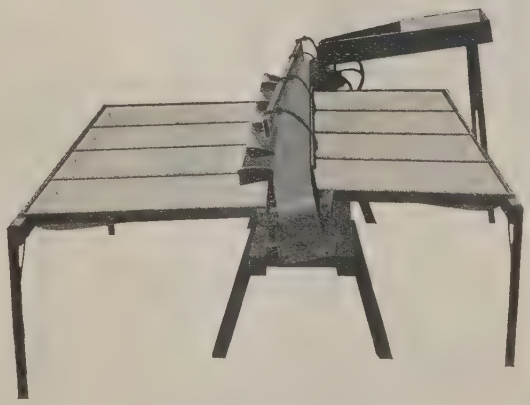
The Labour Saving alone will more than Pay for it the First Season

There is nothing to get out of order, and is so simple that a child can operate it.

The Machine with the ONE moving element.

This Grader is built for EFFICIENCY and DURABILITY at a PRICE to suit every grower

WRITE FOR PARTICULARS



"Harvey-Delany" Fruit Grader

To . . .

D. HARVEY,

ORCHARD IMPLEMENT MANUFACTURER
BOX HILL, E.11, VICTORIA, AUSTRALIA

Show Rooms: 440 ELIZABETH ST., MELBOURNE

Agents all States

FIGHTING INSECT PESTS IN THE ORCHARD.

Apple Bud Weevil.

This is a small, black weevil, covered with greyish scales. It feeds on many kinds of plants, and also attacks fruit trees, but especially the Apple. It usually feeds in the night, and attacks the young buds and bark. Spray with arsenate of lead.

Light-brown Apple Moth.

Keep a sharp look-out for the active green caterpillars of this moth. They are particularly destructive to the young Apples, Pears, and other fruits, also to the foliage of these trees. Early in the season they often destroy the fruit spurs of fruit trees. Use arsenical sprays.

Apple Root Borer.

Continue spraying with arsenate of lead against these insect pests. Place zinc bands around trees to prevent beetles from crawling to the leaves to deposit their eggs. Borer traps could also be used. Keep orchard, especially around trees, free from weeds.

Painted Apple Moth.

Keep a sharp look-out for the caterpillars of this very destructive moth. The caterpillars have tufts of very fine hairs on their back. The male moth measures about an inch across the expanded wings. The front wings are mottled with grey and light and dark brown. The hind wings have a large basal patch of orange-yellow. The female moth is wingless. Fortunately, they are easily destroyed by arsenate of lead sprays.

TREES

From Expert Growers

are far more likely to give you the maximum results.

GOODMAN'S

have a reputation for high-class fruit trees—the outcome of many years' experience and experiments in growing. For sturdy trees, that will bear well under all climatic conditions, buy from Goodman's.

Free Catalogue Gives Details

All varieties of fruits grown.

Write for your copy now.

C. J. GOODMAN

Picnic Point Nurseries,
BAIRNSDALE, Box 47, Vic.

(W. McF.)

Woolly Aphids.

Woolly aphids are now spreading in orchards. Spray with nicotine sulphate, or kerosene emulsion. Introduce aphelinus parasites into affected orchards. These are obtainable from the Department of Agriculture Orchard Supervisors in each district.

Black Aphids of Citrus Trees.

The young growths on citrus trees are in many orchards badly infested with black aphids. Owing to their sucking the sap, the tips of the trees turn black and die. Spray with nicotine sulphate or black-leaf 40. It will probably be necessary to spray several times before all the insects are destroyed, as they often fall, or are blown to the ground and climb up the trees again.

Codlin Moth.

These moths are usually very prevalent during this month. Spraying should be continued with arsenate of lead, 3 lb. to 50 gallons, first, a week after petals fall, and at intervals of from 21 to 30 days, until within 21 days of harvesting in the case of early fruit, and until the end of February in the case of late fruit. In northern districts and dry summers, at shorter intervals.

Small Looper Caterpillars.

Small brown "loopers" are fairly abundant this season. One caterpillar would often eat several holes in every Apple in a bunch. When nearly ripe, these depressions look somewhat like the black spot fungus, and it gives the Apples a diseased-looking appearance. Cherries are also attacked, and are destroyed and fall. Use arsenate of lead.

Cutworms.

Several species of cutworms are rather plentiful this season in some orchards. They climb the trees and eat holes in the fruits, such as Apples, Plums, and Apricots. Spray same as for "loopers." Poisoned baits spread around trees are also recommended.

Rutherglen Bug.

This is one of the many plant bugs found in Victoria, and it is probably the most destructive. It is a very active insect, and has a habit of dropping or flying to the ground when plants, fruits, etc., on which it is resting are touched. The bug is furnished with a rostrum or beak, with which it sucks the sap from the plants, and causes them to wither and die. Use phenyle spray, which is made up as follows:—

1 quart phenyle.
3 lb. washing soda.
1 bar yellow soap.
40 gallons water.

The soap is shredded and dissolved in hot water. The other ingredients are added, and the mixture made up to 40 gallons. Tobacco sprays are also recommended. Smudge fires are also used against these pests. When a gentle breeze is blowing, make smudge fires at intervals amongst the trees, and sprinkle a little sulphur on them. Should sulphur be used, fires must not be made too near the trees, otherwise foliage will be damaged.

MANCHESTER

(40 Miles Inland)

Is the Nearest Deep-water Port to BIRMINGHAM, BRADFORD, COVENTRY, HALIFAX, HUDDERSFIELD, LEEDS, LEICESTER, NOTTINGHAM, SHEFFIELD, STOKE, and over 200 cities and towns in England's greatest industrial area.

The Bulk of Australian Fruit Is Landed in London

yet the population of the North and Midlands is greater by some millions than that of the South of England.

GROWERS AND EXPORTERS PAY THE BILL!

For Handling and Transport Charges and Deterioration of fruit despatched from London to the North for re-sale.

Official records of prices prove

There is no Better Market than MANCHESTER

and the Port, Dock, Sale Room and Forwarding facilities are SECOND TO NONE.

Ensure Minimum Charges and Maximum Results By Direct Shipment to Manchester Docks.

Address enquiries as to opportunities for direct trade to:—

W. J. WADE, Representative of the Manchester Ship Canal Company
8 BRIDGE STREET, SYDNEY, N.S.W.
Cables and Telegrams:— **"Portoman," Sydney.**

Victoria.

Crop Reports

PAKENHAM.

The Apple crop for next season will be a very light one at Pakenham, practically a failure, states Mr. J. F. Moody, Toomuc Valley Orchard. The 1927 crop was destroyed by thrip, and owing to the 1928 glut, losses were suffered by many growers.

Apples form the main fruit crop, and the area under fruit (delivering to Pakenham railway station), is about 1,400 acres. The principal varieties grown are—Jonathans, Yates, Delicious, Statesman, Rokewood, and Edna May.

SOMERVILLE.

Prospects of Fruit Crops.

Messrs. John Brunning & Sons, report as follows:—

Apples generally are very light, with exception of trees that were "off" last year (about one-fifth of total trees), and bearing this year; this applies to such Apples as Statesman, Rokewood, Reinette, Rymer, Alfiston, etc., which are carrying good crops. Jonathan, except on young trees from five to nine years, are practically bare of fruit—that is, speaking of trees from ten to forty years. The older they are, the less fruit.

Rome Beauty are carrying a fair crop, Granny Smith, a good crop; Delicious are blank entirely, except on a few isolated trees, where a good crop is showing, but these would not amount to many hundreds of cases altogether; Tasma, a fair crop; Five Crown, light.

Pears.—W.B.C., Beurre de Capiamont, Winter Cole, Broome Park, Beurre Bosc, Glou Morceau, are carrying good clean crops of fruit.

Plums.—Light to medium.

Apricots.—Medium to heavy. Moorpark, Mansfield Seedling, Beauge mainly.

The failure is mainly due to several reasons—mainly applying to the Jonathan failure. They are: leaving fruit to get full color and maturity, with a heavy crop, thereby devitalising the next season's buds to gain 6d. a case extra for color, sacrificing next year's crop.

To the dry period during last summer, affecting the bud development.

Though, buds were formed, the tree had not the strength to set the fruit.

To lack of pollenisers at the right period, these blooming later than usual.

"To choose the Best is Wisdom"

When You Buy a

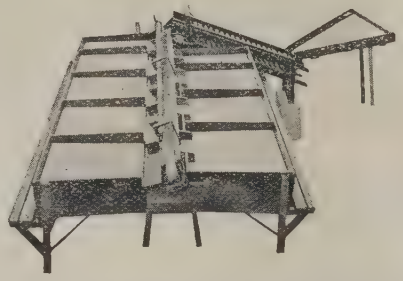
"LIGHTNING" FRUIT GRADER

YOU BUY FOR ALL TIME

The "Lightning" will still be an asset when regulations for marketing fruit are much more stringent than they are at present.

Fitted with the "Lightning" Patented Rubber Roller—the secret of successful sizing.

Equally successful for every class of fruit—Oranges, Lemons, Mandarins, Peaches, Apricots, Plums, Apples, Pears, Tomatoes, etc.



Model 10, with the Elevator Conveyor attached. Spring floor bins on each side of the Machines. Each bin will hold up to 3 bushel cases of Fruit.

The one machine efficiently sizes the lot

WITHOUT DAMAGE.

In addition to Sizers, we manufacture complete Processing Equipment for Packing Houses, Gravity Conveyors, Lidding Press, Clamp Trucks, etc.

THE "LIGHTNING" FRUIT GRADER CO.

5 Hoddle Street, Collingwood, N.9, Melbourne, Vic.

Cable and Tele. Address: "Lightning," Melbourne.

To rough weather (wind, gales, for three weeks), thereby stopping the bees and other insects from operating.

To insufficient shelter belts in exposed positions.

In the early years of cool storage, when there were not so many cases stored, the trees were picked over and over, consequently buds would form up strongly for the next year's crop. But to do this now would mean that the keeping qualities of the fruit would be impaired by removing at the different stages, causing what is called "going soft" or "mealy," or becoming too moist in flesh content.

This contention can easily be proved by storing fruit off a tree carrying a heavy crop, against fruit that has been picked off a tree which has been picked over several times, or even twice, or a light crop tree—taking the fruit of equal size, color, etc., for the purposes of making the comparison. The fruit off the full-crop tree will store longer and better than the other.

The foregoing are mainly the reasons for an uneven crop throughout the orchard, and for the other failures above mentioned.

The time (if the above is correct) will come when orchardists will have to try and make, say, half the orchard bear this year, and half the following year, by either pulling the whole crop off the area required or using some spray which will cause the fruit to fall off in the early stages.

Another way to get continuity of supply, is the planting of fresh areas, say, every four or five years. These young orchards would then, with out effort, carry crops of fruit each year: not like the older orchards, which have to be urged along with expensive manures, etc., to get the fruit, and which generally fail to crop when most required.

Silvan.

Mr. H. Henderson, Hon. Secretary, Silvan Progress and Fruitgrowers' Association, writes under date November 24:—

The principal fruits and varieties grown round Mt. Evelyn and Silvan can readily be summed up thus:—Less deciduous than a few years ago, a slight increase in citrus and Passion Fruit, and a marked increase in berry growing.

So far, the season's prospects are very good for the berry-grower, and it is confidently expected that returns will be gratifying, particularly when compared with last two seasons, which were abnormally dry.

The demand for berry fruits is firm, and the three channels of disposal are well patronised. The motor truck enables many growers to sell their own fruit at the "Market," while "Factory" lots can be delivered in much better condition and more satisfactory in other ways. Direct distribution is largely taken advantage of, and the Housewives' Association still render valuable service by placing the consumer in direct touch with the grower. A new "returnable" container (to take the place of the cut petrol tin, which shortly will almost be unprocurable), has been manufactured for the Association. It is a wooden container, and will permit of berries carrying long distances and in better condition than in the tin. The new contained has been approved of by the Housewives' Association, and will be available to any grower requiring supplies. The price is 10½d. each.

Portland.

After the abnormally heavy crops of Apples and Pears in the Portland district last season, not more than 25 per cent. will be harvested this year, writes Mr. W. J. Williamson. Portland cool store is still operating, and Jonathans are still being taken out in

first-class condition. One of the proprietors packed his Apples when placing them in the store, and he had no occasion to re-pack on sending them out to customers. There has been no loss through scald here.

Export agents have visited the district, but there is little business for them.

Growers are planting Tomatoes, in order to have something to do during the packing season. Many of them will be handling Tomatoes instead of Apples, so light are some of the orchards.

The area under fruit at Portland is about 300 acres of Apples and Pears. The Apple varieties grown are Jonathans, Five Crown, Delicious, Sturmer, and Romes.

Mount Dandenong.

On Mount Dandenong and its immediately adjoining district, Kalorama (writes our correspondent), the principal fruits grown are berries of all descriptions, which under favorable conditions produce prolific yields of large-sized and highly colored fruit. On the lower lands, Apples and other hard fruits thrive, but from a commercial standpoint, the district is generally devoted to the growing of berries and vegetables, large areas of the latter having been planted this year.

The prospects at present are highly promising for heavy crops, and in some of the more advanced gardens, Strawberry picking will begin in about a week. Following the remarkable and record rainfall in October of nearly six and a half inches, and an additional fall of 245 points this month, the berry plants and bushes probably have never before appeared in better heart and condition.

The Thrips Menace.

It cannot be overlooked, however, that there is a very disturbing influence in evidence of a great visitation of thrips. Raspberries and Logans are just beginning to flower, and growers are viewing the possibility of an insect invasion with apprehension.

The Raspberry canes in the

Government Research Farm

at Kalorama are looking remarkably well, and the farm is regularly visited by officers from the Science Branch of the Department of Agriculture. This farm will provide opportunity for valuable field work which has never before been available for the study of plant diseases and insect pests.

Merrigum.

The estimated crop of Peaches in the Merrigum district for the coming season, will be hard to gauge, owing to the damage done by green aphis (writes Mr. E. Blackburn, Merrigum). Some estimates put the damage at 50 per cent., many believe it will be more.

The Pears and Apricots that set well, and gave promise of a good crop, are falling badly, probably caused by the attention growers had to give to green aphis, and the lack of watering, which had to be neglected, as it was necessary to keep the ground dry while spraying was being carried out.

Established 1896.

Cooksley & Co.

Fruit Agents.

Fruit Exchange, Brisbane

Consign to the Agents with years of experience, who guarantee Fruitgrowers the best of Attention and Satisfaction.
Selected Tasmanian and Victorian Representatives.
Reference: Commercial Banking Coy., of Sydney, Bank of Victoria.
Shipping and Railing, No. 29.

The varieties of Peaches that suffered most from green aphis, were:—

Dessert and Eating: Crawfords, Black Prince (very bad); Mayflower, Palmerston, Hale's Early (bad); Brigg's Red May, Zerbes, Elbertas, High's Early Canada (slight).

Canning Varieties: Nichol's Orange Cling, Goodman's Choice, Pullar's Cling, Thieles' Cling, Healesville Cling (very bad); Phillip's Cling, Golden Queen (only moderately affected).

Approximately 750 acres are under fruit hereabouts. About 150 acres are young fruit or cut down trees that are not bearing; 150 acres are in legitimate market varieties, and the rest are canning fruits.

AGENTS WANTED

To Influence Consignments of Apples by Reliable Firm

Write, Stating Terms, Etc., to—

HARTSTOKE, FRUITERERS LTD.,
Brentford Market, Middlesex.

Code: A.B.C., Fifth Edition.
Cables: "Hartstoke, Brentford, Middlesex."

Peaches, Apricots, and Pears are the main fruits grown.

Apricots (dessert and canning): Oullin, Moorpark, Tilton and Mansfield Seedling.

Pears (dessert and canning): W.B.C., Josephine, and Packham's.

Last year 133,000 cases of fruit were forwarded by rail to all stations, and about 5,000 cases by road to Kyabram factory. Approximately 10,000 cases of fruit was lost owing to brown rot. It is doubtful if 85,000 cases will be harvested this year.

Growers are becoming more reconciled to prepared Bordeaux mixture for spraying. Blair's Powder is the most favored in this district, and combined red oil and Bordeaux has been tried with promising results.

Doncaster (20/11/28).

Mr. A. F. Thiele reports as follows:—

Pears, Peaches, Lemons, some Cherries and Apples are the principal fruits grown here.

Crop prospects:—Peaches heavy, all sorts; Pears very fair; Cherries fair; Apples almost a complete failure.

There is no comparison between this and last year, for last year there was an overdose of all kinds of fruit. Lemons, of course, are heavier this season.

Healesville (27/11/28).

Mr. F. W. Vear writes:—The crop this season will be light.

Jonathans, Yates, Granny Smiths and Sturmers light; Crowns fair; Pears good.

Absence of Bees.

I consider the reason for a light crop was due to climatic conditions. When the trees were in bloom, we usually have plenty of bees, but it was a rare thing to see any about for several weeks about that time.

Bunyip (24/11/28).

Mr. F. Thomas, M.A., reports:—In our district there is very little fruit of any variety. Some trees bloomed freely, but the fruit did not set. In most orchards there is less fruit than when the thrips took the crop in 1926. Even Pears and Plums, which set well, have dropped heavily. With two years out of three without income, orchardists are looking out for less precarious ways of earning a living.

Canned Fruits.

The following sales of Australian canned fruit were effected in Great Britain during the week ended November 10, 1928:—

	Cases.
Apricots	3,983
Peaches (halves)	6,797
Peaches (sliced)	550
Pears	4,237
Total	15,567

The total sales from the commencement of the season to November 10 are, therefore, as follows:—

Apricots	40,329
Peaches (halves)	155,108
Peaches (sliced)	55,430
Pears	78,748
Total	329,615

ADVANCES TO GROWERS.

Government Commitments.

Detailed information concerning the manner in which the Government has assisted the growers under the provisions of the Fruit Acts and the Primary Products Acts, is contained in the annual report of the Auditor-General, recently issued.

Incidentally, the report contains much strong criticism, and the practice of extending loans to fruit preserving companies and the like without executing an assignment or mortgage. In that respect the Primary Products Advances Act provides that the amount of any advance, or any portion thereof not repaid, shall be, with interest, a first charge on the undertaking or property, and the profits, assets and uncalled capital of the company.

This applies only, however, to those companies which have obtained advances under that Act, and even then it appears that the protection given to the taxpayer is of little value if the company is not called upon to execute an assignment.

A case in point was the Tongala Fruit Processing Co. Ltd. In this speculative business the shareholders lost about £2,000, and the taxpayer about £2,400. The Auditor-General emphasises that this is a clear instance of the necessity for taking precautions for protecting public money.

The total amount advanced to companies under these Acts to June 30, 1928, was £615,182, and interest capitalised for the year was £11,839. Repayments for principal amounted to £166,585, and the liability of the companies to the Treasurer at June 30, 1928, amounted to £400,457.

Further concessions were made last year, and the companies should be in a position this year to meet the reduced and extended payments as they fall due.

There were seven companies which failed to meet their liabilities to the Treasurer at June 30, the arrears of interest amounted to £44,278, and arrears of principal to £68,177—a total of £112,455.

The Pakenham Upper Fruit Co. Ltd. had been granted generous concessions, but could not make a success of its operations. As the company was doing no business, the Treasurer, as a safeguard, appointed a receiver on February 7, 1928, and later a liquidator. The estimated realisable value of the assets was set down as £828. Up to September 3, £464 had been realised, and it was considered advisable to hold over further negotiations until the next fruit season, when a demand for the property may arise. Action is being taken by the liquidator to call up the capital of the company amounting to £736, but it is expected that the loss will be not less than £1,700.

The Treasury's commitments at June 30 last amounted to £830,850. They comprise:—

Shepparton Orchard Products Co-operative Co. Ltd. (in liquidation	£1,300
Shepparton Fruit Preserving Co. Ltd.	252,000
Ardmona Products Co.	288,000
Kyabram Fruit Preserving Co. Ltd.	213,000
Tongala District Dairy Ltd..	7,000
Woorinen Fruit Growers' Co-operative Co. tLd.	3,400
Doradillo Account, 1925	20,000
Grape Account, 1926	17,000
Distillation Account, 1927	10,000
Council Agricultural Education	7,000
Koyuga & District Dairy Co.	1,500
Western & Murray Co-operative Bacon & Meat Packing Co. Ltd.	4,000
Exhibition Trustees	6,650

CANNING DEVELOPMENTS.

It will be of interest to canners of all types of goods to know that the Austral Otis Andebar Cannery Equipment Pty. Ltd., South Melbourne, have been appointed sole agents in Australia for the Seattle Astoria Ironworks The Austral Otis Andebar Co. are thus handling many leading cannery agencies, such as Anderson Barngrover Manufacturing Co., Seattle Astoria Ironworks, F. H. Langsenkamp Co., Fred. H. Knapp Corporation, Hansen Machinery Co., J. B. Ford Co., Alkalies, etc.

This fact enables canners and jam-makers to have all their wants attended to by the one organisation, who have become experts in the business.

It is also of interest to learn that in addition to their agency lines, they make in their own extensive works at South Melbourne the whole of the machinery requisite for the processing lines in canneries, and all sundry machinery, such as conveyors and elevators, to work in conjunction therewith. A visit to the Andebar works at South Melbourne should prove interesting and profitable to manufacturers.

BORDEAUX POWDER.

Mr. S. R. Bushnell, of Jaques Pty. Ltd., recently conpleted a tour of iVctorian fruit districts, where he made special enquiries in regard to the results obtained from using the new Bordeaux Powder, which his company placed on the market this year. Growers expressed their satisfaction with this prepared Bordeaux as compared with the home-mixed material.

Apart from relieving them of a distinctly unpleasant job, they find that a more uniform strength of spray is obtained.

Fruit and Ornamental Trees

Grown for Sale by

C. A. Nobelius & Sons Pty. Ltd.

Gembrook Nurseries,
EMERALD, VICTORIA

Telephone: Box Hill 154 Catalogue on Application

Inspection Invited

THE CANNED FRUIT SITUATION.

British Preference Sought.

THE canned fruit situation in Australia is dangerous. On top of the heavy carry-over, the new crop of fresh fruit is ripening.

Strenuous efforts are being made to secure a British preference of 2/- per dozen cans. The pronouncements by the British Prime Minister, Mr. Stanley Baldwin, however, do not lend much encouragement to the hope at this juncture.

Strong representations are being made to the British Economic Mission (the Big Four) now in Australia, to secure this preference, and thus not only save the industry, but provide opportunity for further development.

The proprietary canners have now issued statements, both in New South Wales and Victoria, to the effect that they are liquidating some of their plants, and that they are operating on only a very limited scale during the coming season. The reason given is that the entry of the Governments into this field of commerce is seriously embarrassing to private enterprise.

As against this, Mr. W. Cattanach, Chairman of the Victorian Irrigation Commission, states that the canneries were erected to provide outlets for the growers' fruit under a policy of repatriation and closer settlement.

Six years ago the Australian production of canned fruits was about 1,000,000 dozen tins. In the 1927-8 season this rose to 3,244,186 dozen tins. The Australian consumption is about three tins per head per year, or 1,600,000 dozen tins.

In the 1928 season, Australia exported 850,000 dozen tins to Great Britain, which country annually absorbs 8,000,000 dozen tins, the bulk coming from California.

The British market is vital if Australia is to retain her present irrigation and closer settlement policy and provide for additional settlers from overseas.

In the meantime, many growers who usually supply fruit to proprietary canners are seriously alarmed, as this avenue for the disposal of fruit is now closed.

How You Would Laugh!

if a dairy farmer told you that because of a drop in the price of butter-fat, he intended to give his cows less feed, and so reduce the "cost of production." But would you laugh if a fruit-grower said, that due to market conditions, or the ravages of some pest, he was going to leave Nitrogen out of his fertiliser programme on the plea of expense. Yet they're parallel cases. To maintain an orchard or a farm at its maximum of profit, regardless of the state of the market, the soil must be fed properly. To ignore Nitrogen is to underfeed the soil. The use of SULPHATE OF AMMONIA (Australia's Premier Nitrogenous Fertiliser) is the easiest and most practical method of Nitrogen restoration.

Ask about "neutral" quality—dry and free-running.

✣ ✣ ✣

THE METROPOLITAN GAS COMPANY,
196 Flinders Street, Melbourne.

SA 10/28

-LEMONS-

We are the largest Buyers in Australasia

C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vic.

ORCHARD PLOUGH

The **COCKSHUTT ORCHARD TWIN GANG MOULDBOARD PLOUGH** is specially designed for Orchards and Vineyards. It is carefully built with well-braced steel frame, dust-proof wheels, and best soft-centre steel mouldboards. It can be adjusted in a few minutes, so that it will plough closely to the trees or vines without harming them in any way. The lever can also be tilted to let the plough pass beneath low branches.

The Ideal Plough For Orchardists

Full particulars gladly sent on request. Write to-day.

Also Agents for
"Vega" Separators; "Hercules" Drag Saws; "Eureka" Potato Planters; "New Era" Rope Makers, etc.

Buckeye Harvester CO.
Whiteman Street, Sth. Melbourne

Western Australia.

Apple Crop Estimated at 1,000,000 Bushels.

Mr. A. T. Booth, Secretary, Mt. Barker's Fruitgrowers' Co-operative Society Ltd., reports under date November 16, as follows:—

Export Apples and Pears are the principal varieties of fruit grown in the Mount Barker district. Of export Apples the main varieties are Jonathans, Dunns and Cleos.; late Apples for local trade are principally Yates, Granny Smith and Rokewoods. Other varieties such as Rome Beauty, Statesman, Delicious, Doherty, Sturmer, etc., are also grown to a smaller extent. In Pears, the leading export varieties are Winter Nelis, Josephine, Beurre Bosc, Doyenne du Comice and Glou Morceau.

The crop prospects for the coming season are at present good. Soft fruit will be on the light side, Apples good, Pears medium to good.

As we had practically a failure last season, we can make no comparison, but it can be called a little better than a good average crop.

During blossoming period we had rough weather: rain, wind and even slight snow. This prevented any sign of pests, such as thrips. Fusicladium in Pears has been in evidence, but is being overcome by a second spraying with lime sulphur, the first spraying being usually Bordeaux.

The Co-operative Cool Store is installing new oil engines for the supply of electric current for the town.

Donnybrook (18/11/28).

Mr. Gus Sharp, Donnybrook, W.A., reports as follows:—Re South-West Central crop prospects. A heavy setting of all commercial varieties of Apples seems assured here, which also applies to Pears, with the exception of Bartletts, which carried a heavy crop last season.

About one-third of the pip fruits of the State are contained in this area, but not concentrated like Bridgetown and Mt. Barker areas.

The season to date has been very abnormal. Rain fell on 59 days in August and September, and on 20 in October, but the weather appears settled now. Apples blossomed over a very long period, and very profusely, and a good deal of thinning will have to be done if the estimate of 1,000,000 cases of marketable Apples for the State is to be attained.

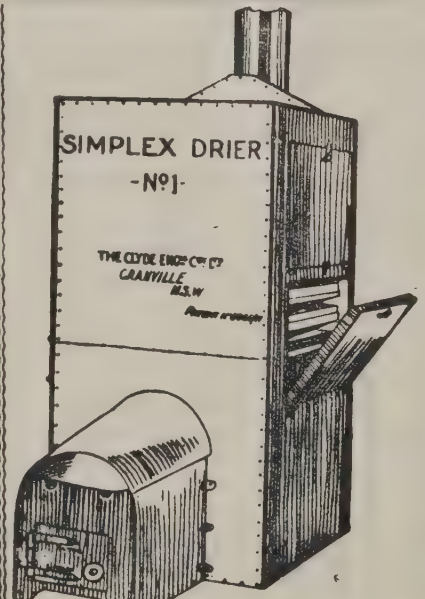
All classes of fruit are grown in this area, but the proportion of stone fruits to pip is becoming negligible.

PAPER MULCH.

Following upon the publicity given in the "Fruit World of Australasia," many growers throughout the Commonwealth are experimenting with paper mulch in a small way. Even with the use of paper not specially manufactured for the purpose, good results have resulted. At Nanneela, in the Rochester (Vic.) irrigation area, a Tomato grower was able to definitely demonstrate that the use of paper mulch for Tomato growing had proved useful in checking weed growth, reducing cultivation, and use of water, and had kept the ground temperature in a more equitable condition.

In Queensland, many growers of pineapples are using the American type of asphalt paper, with beneficial results, and there is every prospect of paper mulch coming into general use when more definite results from the northern State are broadcast.

Goodman's Fruit Trees.—A valuable catalogue giving recommended varieties and many cultural details is available from this standard nursery, Picnic Point, Bairnsdale, Vic.



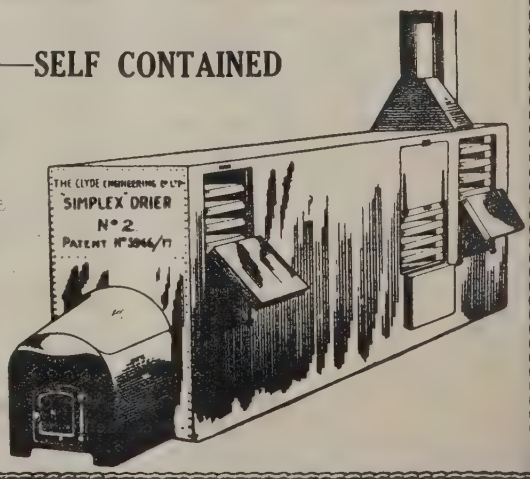
The Clyde Simplex Driers

For Drying
Fruit, Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

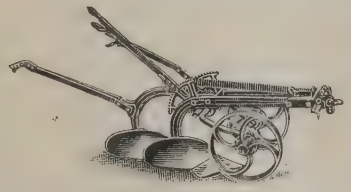
SIMPLE——SELF CONTAINED

Made in Sizes to suit
Householders
Small Orchardists
. . or . .
Large Factories



The Clyde Engineering Co. Ltd.
GRANVILLE, N.S.W.

SUNSHINE Ploughs for Orchard and Vineyard



THE SUNBIRD. Light in draught. Splendid for burying green manurial crops. Will plough to within a few inches of tree trunks or vines. Cuts furrows 9 in. wide to 6 in. deep. Made in 1, 2 and 3 furrow sizes. Prices, £3/15/-, £14, £19. Less 5 per cent. c.o.d. Terms if desired. Knife coulters, 7/6 each.

Also Manufacturers of—Spraying Plants, Farm Engines, Orchard ploughs and cultivators in many types, Harrows, etc.

General Catalogue Posted Free on Request.

H. V. McKAY Pty. Ltd., SUNSHINE HARVESTER WORKS, SUNSHINE, VIC.

Branches: SYDNEY, BRISBANE, ADELAIDE, PERTH.

SUPPORT CO-OPERATION

By Consigning your FRUIT to the

Producers' Distributing Society Ltd.

(Late Coastal Farmers' Co-operative Society Ltd.)

Agents for

"BLACK LEAF 40"

and all Orchard Requirements

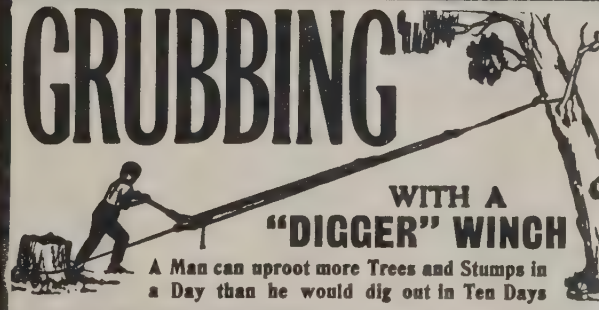
Melbourne Sydney
Newcastle Hobart
Launceston Devonport

GRUBBING

Thousands in Use

It earns its Famous LOW PRICE in a Few Days

Write for Catalogue



WITH A "DIGGER" WINCH

A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days

QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

Please mention "The Fruit World" when writing to advertisers.

Reduction in Price *of the*

NEW SYNTHETIC FERTILISERS

Urea

46 per cent. Nitrogen as Urea.

Diammonphos

20.6 per cent. Nitrogen as Ammonia.
52.5 per cent. Sol. Phosphoric Acid.

NITROGEN FOR FRUIT TREES is best applied in either of these forms, because:—

(1) They leave no useless matter in the soil.
(2) They save cartage, handling, and distribution costs.
(3) They are immediately available.
(4) Their effects last.

IDEAL for swelling and coloring Fruit, and for Autumn application to CITRUS Trees.

Consult your Local Agent, or Write to Us for New Prices and Particulars.

DYES & CHEMICALS [Aust.] LTD.

573-585 Lonsdale Street, Melbourne Also in Sydney, Wellington & Perth

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.

Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Davis, J., Western Market.
Dennys, Lascelles Ltd., Temple Court, Melbourne.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
Mills, J. B., & Co., Bank House, Bank Place Melbourne.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
F. B. Bolton.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Piesse & Co., C.

Launceston.

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.

Dennis & Cooper Ltd., Covent Garden.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salters Hall Court, Spitalfields Market, E.1.

Hull.

White & Son Ltd.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip and Co. Ltd., 7 Bridge St., Sydney.

Manchester.

The Port of Manchester, rep., W. J. Wade, 8 Bridge Street, Sydney.

GERMANY.

Bremen.

Fruchthandel, Gesellschaft.

Hamburg.

Astheimer, P. H., & Son, Fruchthof.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

SPITALFIELD'S MARKETS OPENED.

Every Modern Facility Included.

There was much enthusiasm at the official opening of the Spitalfields Market, on Thursday, November 22. The opening ceremony was performed by Her Majesty the Queen, in the absence of the King, through illness.

Built at a cost of £2,000,000, the market embodies every known improvement in market design. The authorities studied markets in various parts of the world before finalising their plans.

Covent Garden, London.—Messrs. Geo. Monro Ltd., fruit salesmen, of Covent Garden, London, report that they have specialised on the sale of Australian and N.Z. Apples for many years, and have always secured best possible results. They state that "bigger and better business" is their objective. The firm is established at Manchester and Hull.

London (October 8).—Mr. J. O. Sims, fruit broker, Boro' Market, London, reports:—Sold 5,000 barrels Virginian and Nova Scotian Apples at following prices: No. 1 Ribstones, 21/- to 24/-; Cox's, 49/- to 51/-; Gravensteins, 19/- to 24/-; Blenheims, 20/- to 22/-; Wealthy, 17/- to 18/6. Keiffer sold at 27/- to 29/-. Lisbon Grapes, 10/6 to 12/- case; Almeria Grapes, 12/- to 18/- barrel; Dutch Grapes, 10/- to 10/6 tray; Messina Lemons (poor quality), 15/- to 17/- box; Californian Comice Pears, 9/6 to 10/- half-case.

AMERICAN APPLES AT HAMBURG.

At the fruit sales conducted by P. Astheimer & Son, at Hamburg (Germany), on October 18, 7,881 boxes and 3,098 barrels of American Apples were sold at prices ranging from 8½ to 14½ marks (boxes) and 18½ to 29 marks (barrels).

Australasian Markets.

NEW SOUTH WALES.

Sydney (16/11/28).

Mr. F. Chilton, City Markets, Sydney, reports prices as follow:—

Queensland fruits.—Bananas, 8/- to 22/- per case; Papaws, 8/- to 16/-; Pines (smoothleaf), 10/- to 17/-; Tomatoes, 5/- to 10/- per half case; Cucumbers, 25/- per bus.

N.S.W. fruits.—Bananas (Tweed River), 8/- to 22/- per case; Lemons, 5/- to 11/- per bus. case; Navels, 10/- to 15/-; Oranges (Valencias), 4/- to 9/-; Passions, 18/- to 26/- per ½ case; Apricots, 2/- to 12/-; Peaches, 5/- to 12/-; Plums, 4/- to 10/-; Tomatoes, 6/- to 14/-; Cucumbers, 5/- to 14/-; Cherries, 3/6 to 8/- per ½ case; Gooseberries, 3/- to 6/-.

Victorian fruits.—Pears, Jos., 11/- to 15/- per bus.; W.N., 6/- to 11/-; Broompark, 6/- to 11/-; Apples, R.B., 5/- to 10/-; Yates, 6/- to 11/-.

Tasmanian Fruits.—Apples, F.C., 4/- to 9/- per bus.; Crofton, 6/- to 9/-; Dem. (Tasma), 7/- to 11/-; S.T.P., 3/- to 77/-.

Supplies of practically all fruits have been heavy, and as the demand is only moderate, prices remain low. Prospects for the remainder of the season are not very encouraging, as large stocks of Apples and citrus are still held. Fortunately for old season's fruits the early coastal summer fruit crop is not heavy, and the long drought has materially affected size and quality.

VICTORIA.

Melbourne (29/11/28).

The following wholesale prices, supplied by the Wholesale Fruit Merchants' Association of Victoria, are those which ruled in the Western Market yesterday for average quality fruit. Apples, 4/- to 8/- per case; Apricots, 10/- to 14/-; Cherries, 6/- to 11/- half case; green Bananas, Queensland, special, 18/- to 21/-; choice, 14/- to 18/-; standard, 9/- to 11/- per double case; Gooseberries, 4/- to 7/- half case; Lemons, Vic., 3/- to 7/-; Valencia Oranges, 7/- to 10/-; Navel Oranges, Murray district, Vic., good counts, 14/- to 17/-; large size, 9/- to 13/-; others, 12/- to 14/- and 8/- to 11/-; special, higher; Passion Fruit, Queensland, 10/- to 15/- half case; Peaches, 10/- to 18/- per case; Pines, 18/- to 22/-; small sizes, to 14/- per double case; Tomatoes, S. Aus., 14/- to 15/-, a few 16/- half case; Vic., 12/- to 26/-, and a few higher per case; Cucumbers, 20/- to 28/- case.

The Victorian Central Citrus Association reports that Victorian and

border standard Navels sold at 9/- for 60's, up to 17/- for best counts, specials higher; lower grade, to 15/, and plains to 12/-; late Valencias, 7/- to 10/-; specials higher; Common Oranges, 5/- to 9/-; Lemons, 4/- to 9/-.

SOUTH AUSTRALIA.

Adelaide (22/11/28).

Apples, eating, 6/- to 7/- per case; cooking, 5/- to 6/-; Apricots, 8/- per half-case; Bananas, Queensland, 25/- to 26/- per case; Cherries, dark, 10/- per half-case; light, 8/-; gooseberries, 9/- per case; Lemons, 6/-; Loquats, 8/- to 10/-; Nuts, Almonds, 12/- per doz. lb.; Brazil Nuts, 12/-; Peanuts, 11/6; Walnuts, 10/-; Barcelona, 12/-; Oranges, Common, 9/- to 10/- per case; Navel, 14/-; Pears, eating, 6/- to 7/-; Pines, 16/-; Strawberries, 8/- per doz. lb.

TASMANIA.

Hobart (10/11/28).

Apples:—Delicious, good, 7/- to 8/6, medium 3/- to 4/6; C.P.M., choice, 7/- to 8/6; S.T.P., good, 4/- to 4/9; medium, ditto, 2/6 to 3/9; F.C., 1/6 to 3/-; spotted and inferior grades, 1/- to 2/- per case; Cherries, to 23/- per half case.

Western Australia.

Perth (19/11/28).

The Producers' Markets Ltd., report as follows:—Moderate supplies of fruit forward to a good demand. Apples were short and dear. Valencias and Navels were in keen demand. Tomatoe supplies increasing in volume to a good demand. Small consignments of Peaches with values good.

Apples, Yates, prime, dumps, 23/- to 28/6; Granny Smith, prime, 22/- to 27/6; Pioneer, prime, 20/- to 22/3; Doherty, prime, 21/- to 24/6; Navels, bus., 14/- to 19/6; ½ bus., 8/- to 12/6; Valencias, bus., 9/6 to 14/-; ½ bus., 7/- to 12/9; Lemons, prime, 8/6 to 14/6; Loquats, best, to 22/-; Tomatoes, 20/- to 30/-; Cherries, trays, to 28/6; Peaches, ½ bus., 20/- to 24/6; Cape Goosberries, 8½d.; Strawberries, 16/- to 21/3.

QUEENSLAND.

Brisbane (22/11/28).

Lemons, 3/- to 5/- a ¼ case; Oranges, large, 9/- to 11/- bus. case; small and medium, 5/- to 8/-; Stanthorpe Peaches, 8/- to 10/- and 5/- to 77/- a half-bushel case, 2/6 to 5/- a tray; Plums, 8/- to 10/-, 5/- to 7/- a quarter case, 2/- to 5/- a tray; Pines, rough, 11/- to 14/-; smooth, 10/- to 12/- and 6/- to 9/- a case; Papaws, 4/- to 6/- and 2/- to 3/-; Passion Fruit, 8/- to 10/- and 4/- to 6/- a quarter case; Mangoes, 5/- to 9/6; Rock Melons, green, 4/- to 11/-; ripe, large, 10/- to 16/-; small, 3/- to 8/- a doz.; water Melons, 10/- to 30/-. **Imported Fruit.**—Apples, Vic., Yap, 15/- to 17/- a bushel case, Dem., 15/- to 17/-; Yates, 12/- to 16/-; Tas., S.T.P., 12/- to 16/-; F.C., 10/- to 13/-; Dem., 14/- to 17/-; Crof., 14/- to 16/-; Pears, Vic., B.P., 12/- to 14/-; W.N., 10/- to 15/-; Jos., 12/- to 17/-; N.S.W. Oranges, 10/- to 12/-; Apricots, 5/- to 16/- a ½ case; Plums, 9/- to 11/-; Cherries, 4/- to 9/- a box.

New Zealand.

Dunedin (16/11/28).

Reilly's report:—The "Karetu," which arrived last week, brought very heavy consignments of N.S.W. fruit, in all, 1,500 cases of Oranges, which found a good market; choice Valencias, dumps, realising 20/-, others, 18/-; while small and inferior realised from 15/- to 17/- per case. Pineapples arrived in perfect condition and realised 26/-. Some nice Cucumbers arrived from N.S.W. and brought from 22/- to 24/6. At the moment there is every prospect of choice Valencias, Cucumbers, early consignments of Apricots, Cherries realising fair values. Adelaide Lemons, nice quality, sold readily at 22/- to 25/-.

PRESERVING CITRUS FRUITS.

Useful Work Initiated.

CITRUS PRESERVATION EXPERIMENTS are being conducted at the Victoria Dock Cool Stores, by a Committee of the Council for Scientific and Industrial Research, including representatives of the Agricultural Department, Railways, Federal Citrus Council and Committee of Direction of Fruit Marketing (Brisbane).

The processes, which are being tested, include washing with water, borax solution, and sodium bicarbonate solution, and coating with a film of wax. Investigations on the actual moulds to which the Oranges were exposed are also being made, and the effects of the various treatments on these moulds determined.

PEAR PEELING DEVICE.

Following the describing of the new patent Pear-peeling machine in the last issue of the "Fruit World," several public men have inspected the device at the works of Mr. Geo. Mayhew, 193 Victoria Parade, Collingwood, Vic.

Demonstrations have been given showing the speed with which the work can be done, and the elimination of waste. After being immersed in a boiling (patented) solution, the peel is cleanly and thinly removed by jets of water, after which the Pears are halved and cored by automatic machinery. The patentees are convinced their process will greatly reduce the costs of production of canned Pears, and generally assist the Australian fruit industry.

OBITUARY.

Mr. J. G. Mumford.

We regret to announce the death of Mr. J. G. Mumford, fruit merchant, of 449/451 Flinders-lane and Western Markets, Melbourne, who was one of the oldest and most respected members of the fruit trade in Victoria. For a number of years the late Mr. Mumford did not enjoy the best of health, but his many friends will long remember him for his cheerful disposition and sympathetic nature.

He was an outstanding personality in the trade; after considerable experience with the well-known firm of Messrs. Swallow & Ariell Ltd., he commenced to operate on his own account some 22 years ago, and his popularity amongst growers was such that in a very short space of time he established an extensive business as a wholesale fruit and vegetable merchant and general commission agent. The late Mr. Mumford was an appreciated judge at fruit shows. In due course he brought his sons into the business, and at the conclusion of the Great War, at which two sons served in the Australian Field Artillery, he retired from active management, partly owing to ill-health. In recent years the business has been conducted by the sons on behalf of their father, and it is the intention of the family to continue to trade under the name of the respected founder of the business.

Orchard Sprays.—Messrs. A. Victor Leggo & Co., direct attention to the fact that for over 20 years they have faithfully served the Australian fruit industry in supplying reliable spray materials for the control of orchard insect pests, and fungus diseases.

In particular, their "Vallo" Nicotine Sulphate is a standard product of proved worth, and they urge growers to use it in preference to the American articles. A very interesting booklet dealing with "Vallo" sprays is available on application.

Eggs from your fowls in Summer

SUMMER is a time when eggs are needed so much, especially round about Christmas and New Year. Unfortunately, at that time of the year, many fowls have an annoying habit of ceasing to lay, or, at any rate, of laying only an occasional egg. But is it their fault? Be assured that it isn't. Your fowls, like those of the writer of the testimonial below, will lay even through the hot weather if they are kept fit by giving them Karswood (which contains dried and ground insects). They will *keep on* laying, too, if under 3 years, in spite of the hot sticky weather, right through the summer, up till, and even during, the moult.

While Karswood is a tonic food, however, it positively does *not* force, but attains its results by natural means.

Give it a trial. A ½-lb. packet of Karswood is sufficient for 20 birds for 16 days. As further proof of the efficiency of Karswood, read the testimonial quoted below.

"Eggs are bigger"

Dear Sir,

In May, 1927, I decided to experiment with your "Karswood Poultry Spice," and penned up 5 seven-months-old white leghorn pullets (not laying). After using Karswood for a fortnight, they began to lay, the first egg being laid on the 13th May, and for that month the number of eggs laid was 59, and I kept a daily record until the 31st of December. These were the results of my experiment :—

May,	19	*days*	5	*birds*	59 *eggs*
June,	30	,,	5	,,	119 ,,
July,	31	,,	5	,,	117 ,,
Aug.,	31	,,	5	,,	109 ,,
Sept.,	30	,,	5	,,	132 ,,
Oct.,	31	,,	5	,,	126 ,,
Nov.,	30	,,	5	,,	81 ,,
Dec.,	31	,,	5	,,	122 ,,

I did not keep a record of the birds not fed on Karswood, but the eggs were not as big, and from a bigger number of hens I was not receiving as many eggs as from those which were fed with Karswood Spice. (*Sgd.*) *L. D. H.*

Note the Economy

1/– packet supplies 20 hens for 16 days ; 2/– packet supplies 20 hens for 32 days ; 13/– (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices :—½lb. packet, Price 1/– ; 1lb. packet, Price 2/– ; 7lb. tin, Price 13/– ; 14lb. tin, Price 25/– ; 28lb. tin, Price 48/–.

Karswood Poultry Spice

increases egg-production without forcing. It does not contain cayenne pepper or any other forcing ingredient.

POULTRY NOTES.

Culling Old Stock.

Where poultry is kept without proper attention from the owner, it is safe to say that nearly 30 per cent. of the hens are unprofitable, principally through old age.

There is not much trouble in picking out the poorest layers in the flock during spring and summer. The hen that is not laying should be marketed. She is easily picked out, for the comb will be shrivelled and the yellow color in the legs and beak will be noticeable. This yellow color will be absent in the hen that has been laying steadily and heavily.

In the non-layer, the eyelid has a yellow color. In the layer it is pale or white. The yellow tint returns to the earlobe when the hen has ceased laying.

Keep a Few Brooders.

A hen is most profitable as a layer from the sixth to the thirteenth month of her life. After that, her place should be filled by a pullet. Keep on for another year some of the best layers as breeding stock, or a few old and tried hens as "brooders" for hatching and rearing chickens next season. Hens that are deformed or suffering from scaly leg, should be sent to market.

Sunflower Seeds.

Sunflower seeds will help to reduce the poultry feed bill. The birds like them, and they can be grown almost anywhere. It would not do to feed the birds with Sunflower seeds for any length of time, but as a change they will prove worth while. The ripe heads should be stored in a dry place, and rationed out as required. The Russian variety will give best results.

Dressing Poultry.

To remove those bristly stubs and small pin feathers which seem to resist any amount of singeing, use an old safety razor. Once you have tried it, you will wonder why you did not think of the idea before.

Worms in Poultry.

There are various prescriptions for ridding poultry of worms. Many experts recommend giving equal parts of oil of turpentine and salad oil, a dose being about ten drops of the mixture. Another method is to give 1-grain doses of thymol in a little bread and butter or a bolus of pollard, which, of course, will be put down the throat. These doses are for adult birds, and are based on the presumption that the birds are strong enough to stand them. There is considerable risk of serious harm to the constitutions of the birds if dosing with such medicine is repeated. The medicine should be given to the birds while fasting, preferably in the morning following upon a very light evening meal. One teaspoonful of Epsom salts or castor oil should be given one hour after the above medicine and while the birds are still fasting.

Rearing Ducklings.

During the first week, young ducklings should be fed equal parts of scalded bran and pollard, mixed with a small quantity of oatmeal, with five per cent. of fine grit (not sand) added. Feed four times daily in quantities that the birds will clean up in a few minutes. When the ducklings are a week old, the grit can be placed separately in a receptacle where they may help themselves.

Finely cut green food should be fed separately after the first week. Boiled mincemeat can be given them in small quantities, and increased as the birds develop. As they grow older, feed equal parts of maizemeal, bran and pollard. It will be found best to moisten the mash with hot water until the birds are two weeks old. Water should be available day and night. Probably the most common cause of mortality among ducklings is confining them by night in a brooder without water, and giving them a heavy drink before their morning meal.

Ducklings affected from this cause usually stagger and give every indication of suffering from a fit. The drinking vessels should be sufficiently deep so that the birds can wash off any food that may adhere to their nostrils. Once the nostrils become clogged, the duckling ceases to thrive. See that the ducklings do not sleep on anything damp. Keep drinking water well away from their sleeping quarters.

BEEKEEPING.

Do Bees Injure Fruit?

Many orchardists believe that bees are responsible for considerable damage to fruit by puncturing the skin and sucking the juice.

The mouths of bees, however, cannot pierce the skin of fruits. The damage is started by some other insect, or bird, and the bees quickly discover the puncture. They then attack the fruit until they have practically taken all the juice.

Bees never start the trouble, and they compensate for any damage done by their usefulness in the cross-pollination of the fruit flowers.

How to Prevent Honey from Souring.

Shortly after being extracted from the combs, honey should be heated for a few minutes to a temperature of 160 degrees Fahrenheit. This will destroy the organisms present in the honey which may bring about fermentation. If honey has been stored in the granulated form and a thin film of liquid begins to appear at the top, this honey is almost sure to start fermentation in a short time.

If honey can be heated to 160 degrees Fahrenheit just as the fermentation begins, the honey can be saved without having any of the acid flavor found in fermented honey. If honey is being transferred from storage cans to retail packages of either glass or tin, it should be heated to 160 degrees Fahrenheit before being put into such containers, both to prevent fermentation, and to prevent regranulation in a short time.

Timm & Gerstenkorn

Fruit Auctioneers and Brokers

Fruchthof . HAMBURG . Germany

Established 1885

Tel.-Addr.: „Timmkorn Hamburg"

Special Catalogues showing prices issued after each sale

Account sales and cheques sent promptly after sale if desired cable remittance

Phone : F 4869

Vic. Rep. Consignments solicited * Advances if desired

BARKER, GREEN & PARKE PTY. LTD., 533 Collins St., Melb.

Laborious Cherry Facing

reduced to a minimum by the use of the

"Pacemaker" Mask

Facing four cases easier than facing one, and the whole "get up" of the fruit much more attractive. The patentees designed the "mask" for their own use, but cherry growers have been so keen about it that it is being distributed Commercially.

Excellent for gooseberries and other small fruits.

Virginia Hygienic Orchard Coy.

P.O. Box 5. Young, N.S.W

Better Fruit——and more of it IF you Spray with

Paterson's Concentrated

"CLENSEL"

Insecticide and Fungicide

No other solutions required.
Non-poisonous.
Non-injurious.
Non-inflammable.

Literature on Application

184-6 Queen Street

MELBOURNE, C.1.

Cent. 2654 Cent. 2654

Fruitgrowers !

. . Buy Direct from . .

MANUFACTURERS

Fencing Wire, Barbed Wire, Wire Netting, Tanks, Corrugated Iron, Etc., at Greatly Reduced Rates!

OTHER LINES INCLUDE:
Dropper Staples, Fencing Staples, Wire Nails, Down Pipes, Spouting, Ridging, Baths and Basins, Etc.
All Sheet Metal Work.

Write for Price List.

COMMONWEALTH
Barbed Wire and Nail Works
Pty. Ltd.
Office & Works:
94 Sturt Street, South Melbourne.
'Phone: M. 2277.